

DE GRUYTER
MOUTON

*Paul Cobley, John Deely, Kalevi Kull,
Susan Petrilli (Eds.)*

SEMIOTICS CONTINUES TO ASTONISH

THOMAS A. SEBEOK AND THE DOCTRINE OF SIGNS

SEMIOTICS, COMMUNICATION AND COGNITION

DE
|
G



Semiotics Continues to Astonish

Semiotics, Communication and Cognition 7

Editors

Paul Cobley

Kalevi Kull

De Gruyter Mouton

Semiotics Continues to Astonish

Thomas A. Sebeok and the Doctrine of Signs

Edited by

Paul Cobley

John Deely

Kalevi Kull

Susan Petrilli

De Gruyter Mouton

ISBN 978-3-11-025319-1
e-ISBN 978-3-11-025438-9
ISSN 1867-0873

Library of Congress Cataloging-in-Publication Data

Semiotics continues to astonish : Thomas A. Sebeok and the doctrine of signs / edited by Paul Cobley ... [et al.].
p. cm. — (Semiotics, communication and cognition; 7)
Includes bibliographical references and index.
ISBN 978-3-11-025319-1 (alk. paper)
1. Semiotics. 2. Sebeok, Thomas A. (Thomas Albert), 1920–2001.
I. Cobley, Paul, 1963– II. Title. III. Series.
P99.S39425 2011
302.2092–dc23

2011017594

Bibliographic information published by the Deutsche Nationalbibliothek

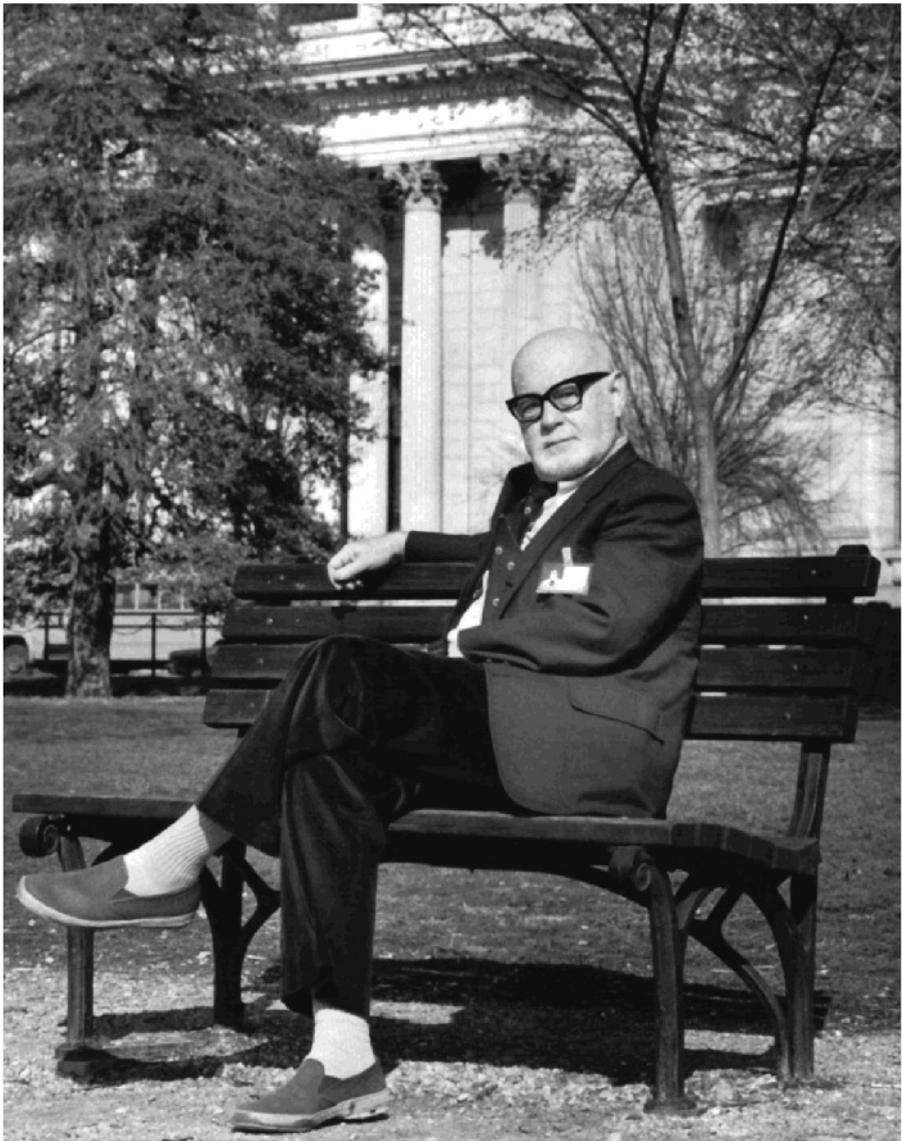
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

© 2011 Walter de Gruyter GmbH & Co. KG, Berlin/Boston

Cover design based on a design by Martin Zech, Bremen
Typesetting: RoyalStandard, Hong Kong
Printing: Hubert & Co. GmbH & Co. KG, Göttingen
∞ Printed on acid-free paper

Printed in Germany

www.degruyter.com



“Semiotics continues to astonish . . .”.

from Thomas A. Sebeok, *I Think I Am a Verb*
(New York: Plenum Press, 1986), p. x

Contents

Chapter 1	
Introduction: Thomas A. Sebeok: Biography and 20th century role . . .	1
<i>Paul Cogley, John Deely, Kalevi Kull and Susan Petrilli</i>	
Part I. Essays	
Chapter 2	
Tackling Tom, lumper and splitter par excellence	19
<i>Myrdene Anderson</i>	
Chapter 3	
When anecdotes are no longer what they used to be	31
<i>Lisa Block de Behar</i>	
Chapter 4	
Ethology and the Sebeokian way from zoosemiotics to cyber(bio)semiotics	41
<i>Søren Brier</i>	
Chapter 5	
Sebeok's panopticon	85
<i>Paul Cogley</i>	
Chapter 6	
The semiotic foundations of knowledge: Remembering Thomas A. Sebeok	115
<i>Marcel Danesi</i>	
Chapter 7	
Thomas A. Sebeok and semiotics of the 21st century.	123
<i>John Deely</i>	
Chapter 8	
Traduttore traditore?	161
<i>Dinda L. Gorfée</i>	
Chapter 9	
Astonishing life.	191
<i>Jesper Hoffmeyer</i>	

Chapter 10	
Semiotics, biology, and the adaptionist theory of literature and the arts	207
<i>Jørgen Dines Johansen</i>	
Chapter 11	
The architect of biosemiotics: Thomas A. Sebeok and biology	223
<i>Kalevi Kull</i>	
Chapter 12	
Tom's often neglected other theoretical source	251
<i>floyd merrell</i>	
Chapter 13	
We got to know his method	281
<i>Ivan Mladenov</i>	
Chapter 14	
About a master of signs starting from <i>The Sign & Its Masters</i>	293
<i>Susan Petrilli</i>	
Chapter 15	
A tribute to Thomas A. Sebeok	307
<i>Susan Petrilli and Augusto Ponzio</i>	
Chapter 16	
Thomas A. Sebeok, hybrid joke-teller.	331
<i>Augusto Ponzio</i>	
Chapter 17	
Thomas A. Sebeok, a portrait of a Finnougrian semiotician.	343
<i>Eero Tarasti</i>	
Chapter 18	
Sebők Tamás – Identity and integrity.	355
<i>Vilmos Voigt</i>	
Chapter 19	
Birth of a notion	365
<i>W. C. Watt</i>	
Chapter 20	
Thomas A. Sebeok: On semiotics of <i>history</i> and history of <i>semiotics</i>	371
<i>Brooke Williams Deely</i>	

Part II. Vignettes and stories

Chapter 21
 Ubiquity. 419
Lisa Block de Behar

Chapter 22
 Un Sacco di Cane. 425
Paul Cobley

Chapter 23
 Tom Sebeok, Hoosier. 427
Donald Cunningham

Chapter 24
 Tom Sebeok, the man who loved time 431
John Deely

Chapter 25
 Brief encounters with Thomas A. Sebeok 435
Mariana Neț

Chapter 26
 Speaking and writing about Thomas A. Sebeok – This is a way
 of thinking 445
Maria Popova

Chapter 27
 Summing up: In lieu of an introduction. 451
Thomas Sebeok

Part III. Letters

Chapter 28
 Anderson letter of 13 May 2002 461

Chapter 29
 Eco letter of 11 January 2002 465

Chapter 30
 Hamp letter of 2 January 2002 467

Chapter 31
 Remak letter of 24 December 2001 469

Chapter 32
 Watt letter of 5 January 2002 471

Part IV. The Tartu connection

Chapter 33

The Tartu connection: Sebeok's correspondence with Juri Lotman . . . 473

Introduced and edited by Tuuli Raudla and Tanel Pern

Part V. Final resting place

Burial site marker and co-ordinates 485

Part VI. Photographs

Twenty-seven pictures 489

Notes on contributors 505

Index 515

Chapter 1

Introduction: Thomas A. Sebeok: Biography and 20th century role

Paul Cobley, John Deely, Kalevi Kull and Susan Petrilli

Thomas Sebeok was born in Budapest, Hungary, on November 9, 1920, the only child of Vera Perlmann and Dezső Sebeok.¹ He died in Bloomington, Indiana, USA, on December 21, 2001. Whoever shall undertake to write a full biography is in for a daunting task, even as concerns the family background in Hungary, including an aunt in Paris and the manner in which the family name was spelled by the father.

There are many standard “biographical entries” extant on Sebeok (e.g., Lanigan 1994; Nuessel 2001; Petrilli 2009), and two major bibliographical surveys (Deely 1995; Umiker-Sebeok 2003). His “books and papers” require five-hundred-seventy-nine entries. “Reviews” and “miscellanea” (forewords, encyclopedia articles, etc.), raise the writings to eight-hundred-thirty-three. Editorial work promoting other scholars adds three-hundred-ninety-five volumes. Translations of his writings form a bibliography in their own right. Besides English, Sebeok may be read in Bulgarian, Chinese, Finnish, French, Georgian, German, Hebrew, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, and Vietnamese; and we have surely missed some.

The early years

Sebeok’s basic schooling took place in Budapest. In 1936, he moved to Cambridge, England, and enrolled in Magdalene College. His father, anticipating the Second World War, advised him the following year to join

1. The family background of Thomas Sebeok is a tangled tale, which it is no part of our project to untangle here. For example, he apparently much disliked his own mother, but had an aunt named Veronica of whom he was very fond, and he was known to have said that “Veronica” was the name of his mother – a misnomer which even Tom’s widow learned of posthumously, with the consequence that it is now “official” in some published biographies (e.g., Deely 2005).

him in New York. This the young Sebeok did, taking citizenship in 1944. Already at Magdalene College the influences which would become the *telos* of his career began their work. There he met I. A. Richards and discovered his work with C. K. Ogden on “meaning”. There too he forayed into the hapless 1926 attempt by MacKinnon to render in English the 1920 *Theoretische Biologie* of Jakob von Uexküll. Sebeok could make no sense of that English. Much later he returned to the work in German, and, at least from the 1982 Seventh Annual Meeting of the Semiotic Society of America (SSA) onwards, von Uexküll’s work became pivotal through Sebeok’s influence in the North American and global development of semiotics, although he had already started to promote that work from 1977 after reading the second edition of *Theoretische Biologie*.

For all his prodigious range of intellectual involvements, positions, acquaintances, presentations and writings – visiting appointments in thirty-five universities of twenty different countries; honorary doctorates in the U.S.A., Hungary, Argentina, Bulgaria, Finland; president of organizations in anthropology, linguistics, semiotics; Fulbright grants to Germany, Italy, Argentina, Uruguay, Mexico; Fellow of the Stanford Center for Advanced Study in the Behavioral Sciences, the East-West Center, the Netherlands Institute for Advanced Study, the National Humanities Center, the Smithsonian, the Woodrow Wilson International Center; etc., etc. – it was into his shaping of the doctrine of signs that everything else came to be gathered and find its place.

The shaping influences

By 1939 Sebeok was enrolled at the University of Chicago majoring in linguistics. His senior year he studied with Leonard Bloomfield, in classes that “were minuscule” in size (as he reports it in a ms. titled “Summing Up”, among his posthumous papers²), where he developed the 1942 publication which was the first of his published writings. “I want to stress”, Sebeok says, “Bloomfield’s scarcely appreciated, withal quite explicit, links with semiotics, especially during his final Chicago years”. He then quotes Bloomfield to the effect that “meaning” is a notion “necessarily

2. John Deely, helping Tom’s widow sort through his papers in June of 2002, came across this manuscript. It was projected as a prospective part of Sebeok’s 2001 *Global Semiotics* book, but was not included after all when the final decisions for the volume were made.

inclusive, since it must embrace all aspects of semiosis that may be distinguished by a philosophical or logical analysis”, what Sebeok would come to call (1975) “the semiotic web”.

The principal influence upon Sebeok at Chicago was Charles Morris, whose *Writings on the General Theory of Signs* Sebeok would later publish (1971) as Volume 16 in the “Approaches to Semiotics” series. After a falling-out between Sebeok and Richard McKeon resulted in Sebeok’s expulsion from the humanities,³ Morris steered Sebeok to anthropology to complete his BA degree at Chicago in 1941. (Sebeok considered⁴ that “the persevering hostility” to Morris on the part of Robert Hutchins as University of Chicago President, supported by Richard McKeon in the Humanities Division and Mortimer Adler in Great Books, set back the nascent rise of semiotics in the United States “by easily a quarter of a century”.)

Within anthropology Sebeok began to develop a “biological way of thinking”. On the second page of an undated manuscript among his posthumous papers, handwritten on stationary of the Washington, DC, Cosmos Club, after the heading “The Tradition I Stem From”, he lists as his principal influences the philosopher Charles Morris, the philologist Roman Jakobson, the theoretical and experimental biologist Jakob von Uexküll with his son the medical doctor Thure von Uexküll, and finally the animal psychologist Heini Hediger. Himself he describes as “a ‘Biologist Manqué’.”

Jakobson entered the picture especially after Sebeok transferred from Chicago to Princeton in 1942 to continue his graduate studies. His assigned thesis advisor at Princeton Sebeok never mentions, because he found him useless and did not get along with him. For actual direction he commuted to New York where Roman Jakobson was teaching in exile at the New School for Social Research. This regular consultation Sebeok always regarded as the real guidance he received in linguistics toward his 1943 MA (in anthropological linguistics), the same year he joined the Indiana University faculty at Bloomington. His Indiana activities were prodigious. Initially he worked for the OSS in the Air Force Language Training Program (quickly as Director) for, among other things, preparation of agents to parachute behind enemy lines in the Baltics. (“World War II propelled me to clutch the verbal code rather than the molecular

3. See this volume, pp. 451–9.

4. Sebeok a.2001: the “Summing Up” described in note 2 preceding.

code”, he explained in his 1984 SSA Presidential Address, referring to how events resolved the agony of his attraction in the 1940s to a career rather in genetics and biology over linguistics and anthropology.) Later he worked along more regular academic lines teaching in Departments of English, Linguistics, Anthropology, and Folklore. So it came about that in 1945 he completed his Princeton Ph.D. (in Oriental Languages and Civilizations) and settled in at Indiana in several programs and departments, but especially at one of its celebrated and unique “research centers”, the Research Center for Anthropology, Folklore, and Linguistics. This name first was shortened to Research Center for Language Studies (RCLS). Then, in 1975, Sebeok as Center Chair added “and semiotics” (RCLSS).

Jakobson’s influence in Sebeok’s linguistic studies was “pivotal”, but not in his “gradual evolution as a semiotician”. Crucial here was his Chicago-acquired taste for the “biological way of thinking”. The decisive year was 1960–1961, his “priceless period of freedom” at the Stanford Center for Advanced Study in the Behavioral Sciences. Given his background in linguistics and anthropology, one would have expected Sebeok to approach semiotics from the standpoint advocated by Ferdinand de Saussure and his epigones under the rubric of “semiology”. But Sebeok never for a moment fell for the idea that semiosis could be adequately reduced or assimilated to a linguistic model of signifying, an idea he simply brushed aside as a “pars pro toto fallacy”⁵ – without denying that semiological studies could find a rightfully conceived place within the larger scope of semiotics proper.

Point of entry into the doctrine of signs

Sebeok devoted that Stanford year to “catching up” on biology, animal communication in particular, a study for which he would shortly coin the term “zoosemiotics” (1963).⁶ This focus eventually (1984) led him to

5. Hence the title, “Pars pro Toto”, for the Preface to the *Frontiers in Semiotics* anthology assembled by Deely, Williams, and Kruse (1986) in close consultation with Sebeok.

6. Sebeok might have considered, as does one of the editors of this volume, that a dieresis on the second ‘o’ of this designation would have made it clearer (i.e. zoösemiotics – the study of animal signs, rather than signs of animals captive in zoos).

distinguish sharply between *language*, on the one hand, as having in itself nothing to do with communication but which, through exaptation, gives rise to linguistic communication as species-specifically human, and, on the other hand, *communication*, which is a universal phenomenon of living nature. Events, as he put it, placed him “at the storm center of a foolish controversy about whether animals have language, to which the one word answer is: ‘No!’”

Zoosemiotics was just the beginning. Ironically, in his “Introduction” to *The Basic Works of Aristotle* published the year after his expulsion of Sebeok from humanities at the University of Chicago, Richard McKeon stated the criterion whereby his erstwhile student would establish himself over the next sixty years as the most important figure in the 20th century development of semiotic consciousness. McKeon observes that a thinker’s influence is marked by the “forms of speech, distinctions, and information” that transmute through usage into “the accustomed materials of a culture and tradition”. This criterion marks Sebeok as the dominant 20th century influence on the intellectual tradition that goes by the name “semiotics”.

“Semiotics” as a word-form

Yet, Sebeok had to work tirelessly, as he customarily did, to establish semiotics. To begin with, the word “semiotics” itself was by no means the dominant term for discussion of signs over the first three-quarters of the 20th century. The dominant term, at least in Western Europe and North America,⁷ was “semiology”, attributed to the linguistic views of Ferdinand de Saussure (1916). Nor was the term “semiotics” the preferred term of the avowed epigones of Charles Sanders Peirce, that other early 20th century founder of the study of signs. In Peircean circles, common wisdom held

7. Oddly, in Eastern Europe, despite the fact that the famous Moscow-Tartu school based its development squarely on the code-based dyadic and linguistic model of sign (“*signifiant/signifié*”), Lotman and the others in “Soviet semiotics” always preferred the term “semiotics” as taken from Locke rather than the term “semiology” proposed by Saussure for sign-studies. See the editorial “Pars pro Toto from Culture to Nature” in *The American Journal of Semiotics* 25.1–2 for an overview in retrospect of the situation in which semiotics finds itself at the end of the first decade of the 21st century.

that the study of signs should be called “*semeiotic* . . . never *semiotics*”. For Sebeok himself, nonetheless (1971), “semiotics” was always the preferred term that he both adopted and promoted in full awareness of the dominant contrary currents (in this respect Peircean no less than Saussurean) of early and mid 20th century developments against which Sebeok swam, and over which he ultimately prevailed.

Not only did Sebeok’s preferred usage become, by the end of the 20th century, the dominant usage worldwide among students of the action of signs, but he either authored (Sebeok 1991a) or inspired (Deely 2003a, 2004) studies that eventually showed that neither was the term “semiology” original with Saussure (though the assimilation of it to a linguistic paradigm distortive of natural signifying was), nor was it true “that Peirce never availed himself of the word *semiotics*” (Sebeok 2001: xvii; Deely 2009a).

Assigning a proper name to the study of semiosis

Sebeok’s settlement upon “semiotics” as the “logically proper name”, as it were, for the doctrine of signs may well have taken place during or shortly after his crucial year at the Stanford Center. Immediately in 1962 he took a first step toward developing a larger paradigm for the study of signs in communication, by organizing at Indiana a conference around the theme “paralinguistics and kinesics”, bringing together the disciplines of cultural anthropology, education, linguistics, psychiatry, and psychology – still language-dominated but, in Sebeok’s mind, nascent with the broader perspective that his study of animal communication had convinced him to be necessary for the student of signs. How nascent was the broader perspective in 1962 is dramatically illustrated in that the conference participants had to wait for the “analogic creation” of the term “semiotics” as proposed by Margaret Mead, near the conference’s conclusion, aptly to cover “patterned communication in all modalities”, linguistic or not. Considering that “the selection of some single term seemed a persuasive device to advance unified research” (Sebeok, Hayes and Bateson 1964: 5), Sebeok entitled the volume from that conference *Approaches to Semiotics*, and used the title again in 1969 to launch his legendary Mouton series.

The *Approaches to Semiotics* volume from the 1962 Indiana conference surely marks the beginning in North America of semiotics as an intellectual movement. Already, in the persons of Jakobson and Sebeok particularly, the powerful assimilation of the seminal semiotic work of Charles

Sanders Peirce was underway. In his 1984 SSA Presidential Address, Sebeok refers to Peirce as “our lodestar”, tracing his “evanescent influence” even upon the work of Ogden and Richards. The Semiotic Society of America, to which Sebeok made that address, was the offspring of “what explicitly was planned and veridically became the First North American Semiotics Colloquium ever held in the United States” at the University of South Florida in the summer of 1975.⁸ The planning sessions and Constitutional Committee for that SSA-to-be were organized during that Florida meeting. October of the following year, then, 1976, saw the First Annual Meeting of the Semiotic Society of America.

Terms for the subdivisions of semiotic study

Already Sebeok had established the term “anthroposemiotics” (1968) to cover study of the human use of signs, as in 1963 he had established the broader term “zoosemiotics”. In 1981 Martin Krampen, in an article published under Sebeok’s editorship, in the international journal Sebeok had helped name *Semiotica* (which would be Latin for “semiotics”), introduced the term “phytosemiotics” for study of the action of signs among plants and between plants and animals viewed from the side of the plants. The three terms – phytosemiotics, zoosemiotics, anthroposemiotics – now completed the naming of the knowledge arising from the action of signs corresponding to the traditional division of living nature into plants, animals, and humans, and soon enough inspired Sebeok (1990) to consider the action of signs as the criterial attribute of life. He advanced the further thesis that sign-science and life-science are coextensive, a vision he named “biosemiotics”, following the cue of Tembrock (Sebeok 1975: 94), and used the term to entitle a volume including the initial challenge to his thesis as too narrow (Deely 1991). Central to biosemiotics as Sebeok conceived it was the pioneering work in animal behavior authored by Jakob von Uexküll (1864–1940). Over the last decade of his life Sebeok tirelessly promoted both biosemiotics in general and von Uexküll’s work in particular. He came also to see (1991) a close affinity between semiotics and cognitive science as the latter was developing toward the end of the 20th century.

8. The first semiotics centre in the United States was established earlier in Brown University by Thomas Winner, who was influenced by Juri Lotman.

Controversies in the field after Sebeok: the reach of semiosis

Thus, by the time the 21st century opened, Sebeok's influence permeated all the terms and distinctions of debate in the development of the study of signs as an inherently interdisciplinary intellectual paradigm global in scope.⁹ The 'open question' within semiotics at that juncture, marked by a formal conference (Nöth 2001) addressing just this point of how far the action of signs extends, was no longer whether semiology is superordinate to, co-ordinate with, or subaltern to semiotics, but only whether semiotics is broader even than zoosemiotics. On this question two affirmative positions had emerged.

There was the comparatively conservative position (how ironic for time to cast the revolutionary figure of Sebeok in such a pose) which would extend semiotics to the whole of living things, plants as well as animals and microorganisms. The conservative faction in the matter of whether the action of signs, and hence the paradigm of semiotics, can be extended beyond the sphere of cognitive life rallied under Sebeok's coinage, *biosemiotics*, but construed to name the whole of the sphere of semiotics.

The more radical faction (chief among which must be counted Peirce himself, and most recently Corrington 2000) did not quarrel with the inclusion of phytosemiotics along with zoosemiotics and anthroposemiotics under the umbrella of semiotics, but argued that even this extension leaves out something that must be included, namely, the physical universe at large which surrounds biological life, developed so as to make life in the first place possible, and upon which all life depends.

An interesting fact is Sebeok's continued influence by, and advocacy of, cybernetics and systems theory. The mercurial young Sebeok of the 1940s and 1950s knew Shannon, Weaver, von Foerster and Wiener, among other proponents of systems theory, and was good friends with Jakobson and Gregory Bateson. Later, of course, he was to become friends with Lotman, even while revising (radically) the modeling theory of the latter.¹⁰

9. See Deely 1989: vii–xiv, "A Global Enterprise", the Preface to the corrected 2nd ed. of Sebeok 1979.

10. Despite Lotman's embrace of Saussure's semiological notion of sign in just the "pars pro toto fallacy" sense that Sebeok had so thoroughly exposed, Sebeok nonetheless saw in the role assigned perception within Lotman's view of language an opening to biology that was not present in Saussure himself, or semiologists generally. Thus he was able to forge a synthesis wherein

The vaunted attempt to unify perspectives on communication which characterized many key symposia after the Second World War (such conferences usually convened by Sebeok) and volumes of revised proceedings published by Sebeok such as those on *Myth* (1955), *Style in Language* (1960) and the aforementioned inaugural volume of semiotics, *Approaches . . .* (1964), was never neglected. Sebeok's final original monograph (with Danesi), *The Forms of Meaning* (2000), principally sought to institute a new, post-biosemiotic terminology for sign study; yet it pursued this by advocating a 'systems analysis' whose recursive character, in line with the cybernetic heritage, eschewed straightforward *vis a tergo* causation. As well as taking an active role in international biosemiotics, at the time of writing the volume, Sebeok – and Danesi, too – was a strong supporter of the journal, *Cybernetics and Human Knowing*, edited by the Danish semiotician, Søren Brier.¹¹ Sebeok and Danesi were also closely following the work of their friend, Alex Meystel, a Washington, D.C.-based systems theorist and investigator into robotics. The implications for semiotics of Meystel's research into intelligent systems were showcased at the 7th Congress of the IASS in Dresden (1999).

Looking ahead

Whatever proves to be the full extent of sign action, Peirce's proposal (1906: CP 5.448n1) that the universe as a whole, even if it does not consist exclusively of signs, is yet everywhere perfused with signs, is a thesis that nicely sums up the life and work of Thomas A. Sebeok, "inventor", as Petrilli and Ponzio like to say (2001), or father, as some prefer, of "global semiotics".

the Innenwelt of the German Estonian biologist Jakob von Uexküll and the modeling theory of the Russian Estonian cultural semiotics of Juri Lotman combined to form a three-tiered modeling system, wherein linguistic communication as an exaptation of the species-specifically human adaptation of Innenwelt to represent more than what can be reduced to direct sensory instantiation served to mediate as a "secondary modeling system" between generically animal Innenwelt as "primary modeling system" and culture as a "tertiary modeling system". This remarkable synthesis, it is not too much to say, has come to provide the main basis for the development of anthropo-semiotic understanding at the beginning of the 21st century (see Sebeok and Danesi 2000).

11. See essay 4 in this volume.

This debate, by involving through semiosis ways revelative of something of nature itself as it is “on its own terms”, turns out to have carried modernity beyond itself as a distinct philosophical epoch. The man who, more than any other, shaped this development of discourse and the terms of its questions, as we have now seen, was Thomas A. Sebeok. That is why the last annual gathering in the 20th century of the Semiotic Society of America took for its theme and for the subtitle of its Annual Proceedings volume “Sebeok’s Century”, as did the 2003 Imatra conference under Tarasti’s directorship. Thus was the 20th century – the century over the course of which semiotics emerged from the shadows of philosophy’s past and from modernity’s margins to define a new mainstream of intellectual development beyond the oppositions of realism and idealism – indeed Sebeok’s century: the century whose beginnings in the matter of signs found a decisive clarity through its outcome, orchestrated by Sebeok as *Maestro Signorum* under the anomalous coinage “semiotics”. Tom stood as a first among equals as the 20th century gave way to the postmodern future.

Contents of the volume

The volume is divided into five parts:

essays commissioned for the volume by a stellar cast of persons who worked with Sebeok – these critically assess Sebeok’s work in its different aspects in the manner of academic articles;

vignettes and stories – Sebeok was aware that semiotics (or any discipline) was not just a *domain* but also a *field* (made up of individuals working within social, personal and institutional constraints) and would try to capture this in his own writings by incorporating relevant anecdotes; this section attempts to do the same through a number of short passages written (except for the concluding vignette written by Sebeok himself) at the request of Jean Umiker-Sebeok;

letters and emails written in the immediate wake of Sebeok’s passing and offering a sense of Sebeok the prolific correspondent;

the Tartu connection, a special section with an overview of Sebeok’s correspondence with Lotman, important for Sebeok’s development of the notion of ‘model’ and his projection for the future of the doctrine of signs;

a *section of photographs* placed selectively, commemorating Sebeok’s life and associations;

final resting place, Sebeok’s internment in the garden outside his study window.

Although the section devoted to essays is ordered alphabetically (by author name) rather than thematically, some further words should be added to orientate the reader in respect of the workings of the volume. In “Tackling Tom, Lumper and Splitter Par Excellence” (#2), Myrdene Anderson considers Sebeok’s work especially in sustaining major conference series such as the SSA and ISISS, as well as the links between his work in linguistics, anthropology and biology.

The following essay, by Lisa Block de Behar (#3), offers an appreciation of Sebeok’s cosmopolitanism and ease with exoticism which also reviews his relation to circuses, magic and Sherlock Holmes. Søren Brier’s essay (#4) considers the development of Sebeokian thought by first putting it in the context of discussions of ethology and the framework offered by Lorenz, Tinbergen and Reventlow for the conceptualization of animal communication. From there, it demonstrates the bases in ethology and zoosemiotics for the later development of cybersemiotics with its key relationship to second-order cybernetics and autopoiesis.

Following Sebeok’s work, “Sebeok’s Panopticon” by Paul Cobley (#5) suggests a new way of discussing vision with reference to the phenomena of nonverbal communication. It tracks ‘anti-ocularcentrism’ in Bentham’s ‘Panopticon writings’, as well as the work of Foucault, Levin and Jay. Drawing attention to typical failures to apprehend nonverbal communication – exemplified in the ‘Clever Hans effect’ or the abductive reasoning of fictional detectives – the essay outlines the way in which Sebeok implicitly re-drew the role of vision in relation to the concept of the self.

The next essay, by Marcel Danesi (#6), explores Sebeok’s semiotics as a “bridge connecting all areas of knowledge” and “a spider’s web, which entraps its prey in a network of interwoven strands”. This essay shows how Sebeok attracted numerous figures from the humanities and sciences into an investigative framework for understanding the *raison d’être* of such phenomena as language, music, narratives, scientific theories, etc.

More theoretical in orientation, John Deely’s essay (#7) assesses Sebeok’s achievement in forging semiotics in terms of providing a new means for understanding the status of the ‘external world’. The essay explicates the concepts of *Umwelt* and *Innenwelt* and places Sebeok in relation to the utility of these terms in understanding the transition from the modern to the ‘post-modern’.

“Traduttore Traditore?” By Dinda Gorlée (#8) considers the art of the translator through Sebeok’s understanding of sign types, particularly the ‘Symbol’. The essay uses Sebeokian anecdote to re-draw translation studies as well as the semiological understandings of sign types. The essay

which follows, by Jesper Hoffmeyer (#9), focuses on arguments about causative agency in the life sphere and explicates the central tenets in this respect of Sebeok's biosemiotics. It shows how biosemioticians in Copenhagen were led to interaction with Sebeok and also demonstrates the importance of Sebeok's 'German connection' (Krampen, T. von Uexküll) in forging contemporary biosemiotics.

Jørgen Dines Johansen's contribution (#10) revisits Sebeok's landmark 1979 essay, 'Prefigurements of art'. Reviewing Sebeok's own review of the literature on animals' 'aesthetic behaviour', it updates relevant observations in light of the renewed interest in evolution in the humanities and sciences since the 1990s. It shows that Sebeok's support for Humphrey's hypotheses put the former very much in advance of his age.

In "The architect of biosemiotics: Thomas A. Sebeok and biology", Kalevi Kull (#11) provides a review of Sebeok's relationships to biology and his work on building biosemiotics, or semiotic biology, including both his work as a theoretician in the field and his activity in organising, publishing, and communicating. It reviews Sebeok's (a) establishing of zoosemiotics, (b) interpretation and development of Jakob von Uexküll's and Heini Hediger's ideas, (c) typological, comparative, and evolutionary study of semiosis and semiotic phenomena in living organisms, (d) idea that life is semiosis, and that semiosphere coincides with biosphere, (e) research on the history of biosemiotics, and (f) his organizational work in establishing biosemiotics.

While Sebeok's 'neglected figures in semiotics' are now better known, floyd merrell (#12) draws attention to 'Tom's Often Neglected Other Theoretical Source' by looking through a Sebeokian lens at the two big questions for humans: language and the universe. Pursuing the idea of the universe 'as a book', this essay discusses the importance of abduction, play, musement and uberty in Sebeok's oeuvre. It then goes on to frame this within Peirce's decalogue of signs, addressing, in the process, Wheeler's notion (favoured by Sebeok) of the participatory universe.

"We Got To Know His Method" by Ivan Mladenov (#13) shows how Sebeok helped young scholars, especially from Eastern Europe, to pursue academic semiotic studies and research, in this case into Peirce. In the process, it details the re-discovery – as a result of Sebeok's incitement – of the first Bulgarian Peirce scholar, Ivan Sarailiev.

Susan Petrilli (#14), in the essay that follows Mladenov's, looks at the possible reasons Sebeok chose to label semiotics a doctrine of signs rather than a 'theory' or 'science'. It focuses on the act of interpretation and the

interpretant, suggesting that “If I am a sign . . . then nothing that is a sign is alien to me – *nihil signi mihi alienum puto*; and if the sign situated in the interminable chain of signs is necessarily an interpretant, then ‘to interpret’ is the verb that best helps me to understand who I am”.

With Augusto Ponzio, Petrilli then presents an essay (#15) in which some of the key concepts of the later work of Sebeok are summarized, explicated and contextualized. These include modeling, species-specificity and the co-extensivity of life and semiosis. It identifies three axes of Sebeok’s semiotics: the descriptive-explanatory; the methodological; and the ethical.

Ponzio’s solo essay (#16) focuses, crucially, on Sebeok’s use and analysis of humour. Specifically, it takes Sebeok’s very short essay (illustrated by Luciano Ponzio) on hybrid jokes – narratives with a nonverbal punchline – and provides a detailed exegesis of the position that Sebeok had only outlined in the essay. The essay refers the ‘semiotic transmutations’ of Sebeok to the sign types of Peirce, particularly iconicity, indexicality and symbolcity.

In 2001, Sebeok re-printed his essay “My short happy life in Finno-Ugric studies”. It is easy to forget that if he had not shaped the doctrine of signs Sebeok would have still been a legend for his contribution to Finno-Ugric studies. Eero Tarasti’s essay (#17) presents this aspect of Sebeok’s life in much greater relief than Sebeok’s own short contribution of 2001 and demonstrates how Sebeok’s Finno-Ugric work was to become essential to contemporary semiotics.

Beginning with an etymological deconstruction of Sebeok’s name, Vilmos Voigt’s essay (#18) provides a digestible guide to the Hungarian connections in Sebeok’s career. It identifies his collaborators within Hungary and abroad, and Sebeok’s spheres of interest within Hungary and among exiled Hungarians. It offers a flavour of Sebeok’s professional life as a Hungarian exile and after.

“Birth of a Notion” by W. C. Watt (#19) is concerned with Sebeok’s extensions of Peirce. Specifically, he discusses Sebeok’s interest in how chains of signification, coursing over the three ways (iconic, indexical, symbolic) in which some *x* can signify some *y*, logically perform together. It draws on a marginal remark on the phrase “signifies iconically” that Sebeok makes in *Contributions to the Doctrine of Signs*.

Finally, Brooke Williams Deely (#20) reflects on how Sebeok contributed to history both as a discipline and on the further implications for all disciplines, taking in the logic of history and the role of the historian as

observer. This essay demonstrates Sebeok's sophisticated understanding of historical processes and historiography in relation to his intellectual vision for the future of semiotics as well as his historical appreciation and recovery of the Poinset-Locke-Peirce tradition.

References

- Corrington, Robert S.
2000 *A Semiotic Theory of Theology and Philosophy* (Cambridge: Cambridge University Press).
- Deely, John
1989 "A Global Enterprise", Preface to corrected 2nd ed. of *The Sign & Its Masters* (= Sources in Semiotics VIII; Lanham, MD: University Press of America, 1989; reprint with new front matter but unchanged pagination of the 1979 University of Texas Press, Austin, 1st ed.), vii–xiv.
- Deely, John
1991 "Semiotics and Biosemiotics: Are Sign-Science and Life-Science Coextensive?", in *Biosemiotics. The Semiotic Web 1991*, ed. Thomas Sebeok and Jean Umiker-Sebeok (Berlin: Mouton de Gruyter, 1992), 45–75.
- Deely, John
2003 John Deely, "The Word 'Semiotics': Formation and Origins", *Semiotica* 146–1/4, 1–49.
- Deely, John
2004 *Why Semiotics?* (Ottawa: Legas).
- Deely, John
2009 "Pars pro toto from culture to nature: An overview of semiotics as a postmodern development, with an anticipation of developments to come", *The American Journal of Semiotics* 25 (1/2): 167–192.
- Deely, John
2009a *Augustine & Poinset. The Protosemiotic Development* (Scranton, PA: University of Scranton Press).
- Deely, John, Brooke Williams, and Felicia E. Kruse, Editors
1986 *Frontiers in Semiotics* (Bloomington, IN: Indiana University Press).
- Krampen, Martin
1981 "Phytosemiotics" *Semiotica*, 36.3/4, 187–209; reprinted Deely, Williams and Kruse 96–103.
- Lanigan, Richard
1994 "Sebeok, Thomas Albert", in *The Encyclopedia of Language and Linguistics*, ed. R. E. Asher (Oxford: Pergamon Press), Vol. 7, 3710–3711.

- Nöth, Winfried, and Kalevi Kull, Editors
 2001 German-Italian Colloquium “The Semiotic Threshold from Nature to Culture”, published in *Sign Systems Studies* 29.1.
- Nuessel, Frank
 2001 “Thomas A. Sebeok and Semiotics”, in Danesi, Marcel, ed., *The Invention of Global Semiotics: A Collection of Essays on the Life and Work of Thomas A. Sebeok* (Ottawa: Legas), 51–65.
- Ogden, Charles K., and Ivor A. Richards
 1923 *The Meaning of Meaning. A Study of the Influence of Language upon Thought and of the Science of Symbolism* (New York: Harcourt, Brace).
- Peirce, Charles Sanders
 1906 “Basis of Pragmaticism”, ms. portions of this date published in CP 1.573–574, continued at 5.549–554, with 5.448n1 “following somewhat after 5.554” according to Burks 1958: 297; entry for 1905(d), p. 298.
- Petrilli, Susan
 2009 “Sebeok”, in Copley, Paul, ed., *The Routledge Companion to Semiotics* (London: Routledge).
- Petrilli, Susan, and Ponzio, Augusto
 2001 *Thomas Sebeok and the Signs of Life* (Great Britain: Icon Books).
- Saussure, Ferdinand de
 1916 *Cours de Linguistique Générale*, publié par Charles Bally et Albert Sechehaye avec la collaboration de Albert Reidlinger (Paris: Librairie Payot & C^{ie}).
- Sebeok, Thomas A.
 1942 “Analysis of the Vocalic System of a Given Language Illustrated by Hungarian”, *Quarterly Journal of Speech* 28, 449–452.
- Sebeok, Thomas A.
 1942a “Examination of the Austroasiatic Language Family”, *Language* 18, 207–217.
- Sebeok, Thomas Albert
 1963 “The Notion of Zoosemiotics”, as reprinted in John Deely, Brooke Williams, and Felicia Kruse, eds., *Frontiers in Semiotics* (Bloomington, IN: Indiana University Press, 1986), 74–75.
- Sebeok, Thomas Albert
 1968 “Goals and Limitations of the Study of Animal Communication”, in *Animal Communication. Techniques of Study and Results of Research*, ed. Thomas A. Sebeok (Bloomington, IN: Indiana University Press), 3–14.
- Sebeok, Thomas Albert
 1971 “‘Semiotics’ and Its Congeners”, reprinted in Sebeok, *Contributions to the Doctrine of Signs* (Indiana University, Bloomington, and The Peter De Ridder Press, Lisse, 1976), 47–58; and in Deely, Williams, and Kruse 255–263.

- Sebeok, Thomas Albert
 1975 “The Semiotic Web: A Chronicle of Prejudices”, *Bulletin of Literary Semiotics* 2 (December), 1–65; “Index of Names” added *ibid.* 3 (May, 1976), 25–28.
- Sebeok, Thomas Albert
 1979 *The Sign & Its Masters* (1st ed.; Austin, TX: University of Texas Press). See Sebeok 1989, below, for details of 2nd ed.
- Sebeok, Thomas Albert
 1979a “Prefigurations of Art”, *Semiotica* 27–1/3, 3–73.
- Sebeok, Thomas Albert
 1981 *The Play of Musement* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas Albert
 1984 “Vital Signs”, Presidential Address delivered October 12 to the ninth Annual Meeting of the Semiotic Society of America, Bloomington, Indiana, October 11–14; subsequently printed in *The American Journal of Semiotics* 3.3, 1–27, and reprinted in Sebeok 1986: 59–79, to which page references in the present essay are keyed.
- Sebeok, Thomas Albert
 1990 “The Sign Science and the Life Science”, in “*Symbolicity*”, ed. Jeff Bernard, John Deely, Vilmos Voigt, and Gloria Withalm (bound with *Semiotics 1990*; Lanham, MD: University Press of America, 1993), 243–252.
- Sebeok, Thomas Albert
 1991 *Semiotic Signatures. Semiotic and Inquiry and Method by Thomas A. Sebeok*, ed. Iris Smith (Norman, OK: University of Oklahoma Press).
- Sebeok, Thomas Albert
 1991a *Semiotics in the United States* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas Albert
 a.2001 “Summing Up”, posthumous ms characterized in note 23, p. 31, above.
- Sebeok, Thomas Albert
 2001 *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., ed.
 1955 *Myth: A Symposium* (Bibliographical and Special Series, American Folklore Society, Vol. 5.).
- Sebeok, Thomas A., ed.
 1960 *Style in Language* (Cambridge: The Technology Press of Massachusetts Institute of Technology).
- Sebeok, Thomas A., A. S. Hayes, and M. C. Bateson, Editors
 1964 *Approaches to Semiotics* (The Hague: Mouton).

- Sebeok, Thomas A., and Marcel Danesi
 2000 *The Forms of Meaning: Modeling Systems Theory and Semiotic Analysis* (Berlin: Mouton de Gruyter).
- Tarasti, Eero, Director
 2003 “The Sebeok Century – A Hommage to the Life and Work of Thomas A. Sebeok (1920–2001)”, June 8–13 Seminar held in the framework of the International Summer Institute (ISI) for Semiotic and Structural Studies, Imatra, Finland; see also section under this title as published in *Semiotica* 150/1–4.
- von Uexküll, Jakob
 1920 *Theoretische Biologie* (Berlin; 2nd ed. 1928, reprinted Frankfurt a. M.: Suhrkamp 1970). Attempted English translation by MacKinnon 1926, q.v.
- von Uexküll, Jakob
 1928 *Theoretische Biologie* (Berlin; 2nd ed.; reprinted Frankfurt a. M.: Suhrkamp 1970).

Sebeok bibliographies

- Deely, John, Editor
 1995 *Thomas A. Sebeok Bibliography 1942–1995* (Fascicle 15 in the Arcada Bibliographica Virorum Eruditorum series of Gyula Décsy; Bloomington: Eurolingua). Unfortunately, the series ed. chose not to take into account the only copy of all the final corrections that were sent for the final production from Mexico (including the omission of the “Studies in Semiotics” series of at least nine volumes Sebeok edited for The Peter De Ridder Press).
- Umiker-Sebeok, Jean, Editor
 2003 “Thomas A. Sebeok. A bibliography of his writings”, in *Semiotica* 147–1/4, 11–73.

Part I. Essays

Chapter 2

Tackling Tom, lumper and splitter par excellence

Myrdene Anderson

Tom as fast-change artist

There's a folk-saying in English to the effect that one 'can't hit a moving target'. This certainly applies to Tom Sebeok – as person, and apropos his abstract field of thought, and regarding his concrete yet ever-expanding oeuvre. One would never wish literally to 'hit' any of these targets, but rather to catch up – to have the luxury of quality face-to-face or electron-to-electron contact with Tom, or to sneak up on and apprehend some web of his ideas ranging through art and zoology, or to follow the proliferating tangle of Tom's publications in the hope of digestion before exhaustion.

To so intersect with this, a moving target, it would help were its direction and velocity predictable, and even then the strategy might be to take aim just ahead of it. Alas, none of these conditions or tactics was an option with respect to Tom. His interests and expertises never ceased to surprise ordinary mortals, even those semioticians already afflicted with omnivorous tastes. When called for, Tom coined expressions that we cannot live without; 'zoosemiotics' and 'biosemiotics' come to mind. Yet, just when one might assume Tom's omnivory to know no limits, albeit tending toward Brownian motion, he would introduce distinctions that might drastically limit the preconditions for semiosis and consequently trim the entire field of semiotics. As will be mentioned later, Tom had reservations about much of the 'ape language' research that thrived during the 1960s and 1970s, and as a consequence little of that was to come under the expansive umbrella of semiotics.

In his career as a moving target, Tom's trajectory started out in Budapest in 1920, with his birth. There he launched his obsession with eclecticism. He relocated in 1936 to Cambridge University, and in 1937 to New York City, where he established his academic prerequisites for college, entering the University of Chicago in 1939. Tom received a B.A. in anthropology in 1941 from the University of Chicago, his proclaimed and preferred alma mater, and his M.A. and Ph.D. degrees in linguistics in 1943 and 1945, respectively, from Princeton. During the Second World

War, his proximity with New York City brought Tom into the orbits of the refugee scholars gathering there, including Jacques Maritain and (especially) Roman Jakobson. In 1943 Tom embarked on what turned out to become a permanent relationship with Indiana University, and in 1944 he became a naturalized citizen of the U.S.A.

Tom had a capacity to communicate in a number of languages, on a near infinity of topics, at many levels of complexity, and in many modalities. In the course of his career, Tom held visiting appointments in no fewer than 35 universities in 20 countries, received honorary doctorates from several domestic and foreign universities, became a Fellow in several centers of advanced study, and presided over a number of national and international associations. Quintessentially, Tom is no act that anyone would volunteer to follow – but we have no choice.

Founder and foundlings

At Indiana University Tom established the renowned Department of Uralic and Altaic Studies, now the Department of Central Asian Studies. There he was also offered the directorship of the Research Center for Anthropology, Folklore, and Linguistics; and in 1956, as a Distinguished Professor in Linguistics, the Center was transformed to be called the Research Center for Language and Semiotic Studies (RCLSS).

The Semiotic Society of America, of which Thomas A. Sebeok was the principal founding force in 1974–1975, celebrated its quarter-century anniversary meeting at Purdue University in 2000 by dedicating the Proceedings volume from the meeting to “Sebeok’s Century”, rather than to the millennium. Both the man and the year 2000 qualify as tricksters – shape-shifters (Anderson 1978, 2000, 2001, 2003a, 2003b). Nor is the identity of the Semiotic Society of America itself all that transparent: first, the SSA ambitiously draws members internationally, not just from the U.S.A.; second, the too-conventional use of the unmarked ‘America’ begs for refinement, if not abstention. Do we indeed mean the entire New World, or perhaps instead North America, or the continent north of the southern border of the U.S.A., or, provincially, the United States? Tom had also collaborated in launching the International Association of Semiotic Studies (IASS) in 1969, and helped foster national associations galore around the world, so perhaps the ‘America’ in SSA was indeed provincial in conception. But Tom, a lumpner rather than a splitter in this instance, might opine that the SSA has better things to do than unpack such trivia: if it ain’t broke, why fix it?

While sometimes holding to controversial conservative views about semiosis, Tom could also generate and embrace diversity in the applications of semiotics. Besides pioneering zoosemiotics and biosemiotics, with Jean Umiker-Sebeok he furthered marketing semiotics and museum semiotics, and explorations into nonverbal communication. Even in his disdain for the ‘ape language’ research proliferating from the 1960s (Sebeok and Rosental 1981, Sebeok and Umiker-Sebeok 1980), Tom underscored the importance of careful empirical design, and alerted analysts about the Clever Hans Effect as leading some to overinterpret results. If in fact that research program slowed, it could well be due to the fact that Tom was frequently a blind reviewer of grant proposals – blind, that is, unless and until he might accidentally scoop up extra compromising sheaves of papers when returning proposals to the elite granting agencies in the U.S., or such is the folklore!

Tom kept SSA from being *or* going ‘broke’, through his inputs, attendance, and – perhaps especially – referrals. We would encounter at the Annual Meetings quizzical if not shell-shocked first-timers, who had to explain, if Tom were not handy to do the honors, that they (1) happened to sit next to Tom on a flight, probably an international flight; (2) had been convinced by Tom that they could ‘pass’ as semioticians and should attend the meetings; but (3) did not have a clue what semiotics was or wasn’t. Especially, wasn’t – recalling that Tom tilted toward inclusiveness when it came to making any outline to the field, interdiscipline, transdiscipline, metadiscipline, approach, paradigm *or/and* doctrine of semiotics. Wearing his midwife cap, Tom eagerly delivered anyone of their doubts as to where their interests or expertise might lie in the cosmic disorder of things. Semiotics in general, and SSA in particular (not to mention IASS), became a permanent or transitional haven for many a scientist, humanist, and entrepreneur.

Total immersion with Tom

At the same time as the world was seeking out Tom and his institutions, he was engaging others in venues around the world, touching many persons who knew nothing of semiotics before their encounter with Tom. By his own admission (Sebeok 1991, Anderson 1992), Tom intersected with virtually all of the public intellectuals of the last two-thirds of the 20th century, from every continent and persuasion, while himself putting global semiotics on the map. A list of just a few of the scholars Tom

encountered in his earlier years would include Manuel Andrade, Ray L. Birdwhistell, Leonard Bloomfield, Fay-Cooper Cole, Fred Eggan, Jacques Hadamard, Roman Jakobson, Claude Lévi-Strauss, Jacques Maritain, Charles Morris, Robert Redfield, I.A. Richards, Milton Singer, and Sol Tax. Apropos our interest in Tom as trickster, the most revealing of these relationships may well have been that with Charles Morris: both were magicians, literally.

I myself discovered Tom Sebeok, first via his zoosemiotics, in the 1960s, while enrolled in anthropology at the University of Hawaii and Yale University. As I came to understand it, semiotics as a whole permeated my anthropological soul, and it seemed that everyone – from or even before birth – must by default be both semiotician and ethnographer, whether knowing it or not. At the time, I was ripe for a formal introduction to semiotics. First as a student, and then as a beginning professor, it never dawned on me that I might actually meet a whole transdisciplinary bevy of capital-S Semioticians, let alone the midwife of them all, Thomas A. Sebeok, as happened at the 1983 International Summer Institute of Semiotic and Structural Studies (ISISSS '83), just down the road from Purdue, at Indiana University.

Very early in ISISSS '83, Tom invited me to join a fraternity of seasoned semioticians who were to carve out time during the summer institute to write some sort of manifesto. Coming from Tom, anything sounded like a good idea, so, sure, why not!

The weeks of ISISSS '83 sped by without any gathering of the designated manifesting minds. I was puzzled and a bit apprehensive. I sat in every seminar session Tom offered, feeling as though I had met someone who had read and thought everything I had, and much, much more besides. I couldn't get enough of Tom, and instead of being my usual soft-spoken self, I would engage him with questions, comments, and contentions. John Deely, also present at those seminars, has commented many times that Tom and I seemed to be on the same, if obscure, telepathic wave-length; I knew myself that Tom was way ahead of me, though, not to mention way above and below. Despite encouragement from a few anthropologists and linguists at Yale (Harold C. Conklin, Floyd Lounsbury, Rulon Wells, among others), I realized I was a mere autodidact in semiotics. At ISISSS '83, I had many disadvantages, but at least one advantage with respect to others in Sebeok's seminars, and that was my generalist background in anthropology. It pleased me that none others than Margaret Mead and Gregory Bateson and their also-anthropologist daughter, Mary Catherine Bateson, were on board in

settling on the very label for ‘semiotics’ in English (Sebeok, Hayes, and Bateson 1964). That 1962 international and interdisciplinary conference on paralinguistics and kinesics at Indiana University was organized by Tom himself.

Besides attending all of Tom’s seminars at ISISSS ‘83, I was drawn to the lectures by John Deely (team-teaching with Umberto Eco that summer a series of lectures on the “Historiographical Foundations of Semiotics”), Martin Krampen, and Joseph Ransdell, and those of many others coming from a kaleidoscope of disciplines and from around the globe – where else! Deely, Krampen, and Ransdell were three of the five manifesting minds Tom had tapped to join him in the extracurricular writing assignment; the other two were Thure von Uexküll and myself. Thure was the physician son of the biologist Jakob von Uexküll, whose own 1940 treatise (Uexküll 1940) had just been translated and published in *Semiotica* through the efforts of Thure and Tom (Uexküll, Jakob von 1940; Uexküll, Thure von 1982). Alas, Thure von Uexküll was not able to attend ISISSS ‘83. Yet there were plenty of other distractions, Umberto Eco’s lectures (with Deely) among them.

All things considered, at ISISSS ‘83 I experienced the intoxicating rush of being a student again, rather than a professional per se. But hanging over me the entire time was the proposed, or dictated, or threatened, manifesto. Was this collaborative assignment going to test my very mettle, or rather be a delicious interlude? Tom seemed approachable on any and every subject; but for this one, so far silence reined.

Throughout the summer institute, Tom proffered not one further clue or any reminder about our prospective collaboration on a manifesto, until the afternoon of the very final day. Then and there we were beckoned to one of Tom’s favorite Bloomington restaurants, and treated to Lebanese food – Tom, John Deely, Martin Krampen, Joseph Ransdell, and myself. (Thure von Uexküll was present – but in spirit only). In casual conversation during previous weeks, I had ascertained that none of these individuals knew what Tom had in mind, which emboldened me to imagine that I would fit right in! To my dismay, though, when gathered around the table, no one admitted to their personal or our collective innocence-unto-ignorance, or asked for clarification. And to my further dismay, Tom let everyone else off the hook when he announced, without any discussion, that I was the one who should write the first draft of this manifesto, within a scant matter of weeks.

In early August this draft would be hand-carried by one peregrinatio- co-author to another (in an international daisy-chain, tracing meetings in

Germany and Portugal and Utah). In September 1983, Martin Krampen carried the annotations from Germany to the NATO Advanced Study Institute on 'Semiotics and International Scholarship' in Alcabidech, Portugal, where Tom added his notes and bore the manuscript to the October SSA meeting in Snowbird, where John Deely and Joseph Ransdell could add, and subtract, their two cents' worth. With their feedback, I produced the second draft in December 1983, still in a daze.

In May 1984 a third draft was circulated, and shortly thereafter John Deely (and Tom) and I met in Toronto at ISISSS '84 to further polish the piece, no longer called a manifesto, but 'Steps to a new paradigm'. Fortunately, Tom anticipated and countered the human tendency for amnesia, making sure the collaborative trail was detailed in a footnote (Anderson et al. 1984: 35). John Deely and I working together polished a final draft in time for Tom to hand out printed copies as a Toronto Semiotic Circle Prepublication Monograph at the IASS Congress that Fall in Palermo, in anticipation of the final publication in *Semiotica*.

All I could imagine appropriate to this both vague and general assignment of a manifesto (thereby suspended between Peircean firstness and thirdness) would be to integrate as many cutting-edge notions as possible in the intersection of science and semiotics. Drawing on the prominent topics discussed at ISISSS '83, I mentioned John Deely's translation of Poincaré's massive *Tractatus*; Jakob von Uexküll's embedded notion of *Umwelt*; René Thom's catastrophe theory; Ilya Prigogine's far-from-equilibrium chaos theory; James Lovelock's Gaia; Lynn Margulis's endosymbiosis and five kingdoms; Gould and Vrba's exaptation; Delbrück's emphasis of metaphor; Bertalanffy's general systems theory; ecology refracted through Bateson, Hutchinson, Margalef, Boulding, and others; autopoiesis from Maturana and Varela: all these for starters, and folding in as much of Peirce as I could muster. I was careful to distance semiotics from positivistic and linear thinking, such as sociobiology, but despite that, some readers later considered this position paper similarly flawed, especially if they recalled the original 'manifesto' title.

In the process of this very loose collaboration, some fundamental issues were raised by the very first to annotate the initial draft. In Germany, Martin Krampen and Thure von Uexküll, reviewing the draft, felt strongly that semiotics' structure should partition in parallel with the five kingdoms proposed by Lynn Margulis and others (cf. Anderson et al. 1984: 23–24). Taken literally, this would lead to monera semiotics, protocista semiotics, fungal semiotics, phytosemiotics, and zoosemiotics. I maintained that we had enough on our plates distinguishing zoosemiotics and anthroposemiotics, not to mention endosemiotics and

exosemiotics. Further, inasmuch as animals such as humans literally contain endosymbiotically and organically most of those other 'kingdoms' but for plants, any utility for the proliferation of nomenclature for nomenclature's sake appeared premature. Tom weighed in through his silence, and indeed, two decades later semiotics has no empirical 'need' for the maximally extended terminology.

At these several ISISSS institutes, and other institutes and conferences and meetings, at various places around the globe, I never missed the opportunities to bask in the sparkle and spangle of Tom's thoughts, which he so generously shared, in formal and informal settings. Encountering Tom in this fashion was a crash-course in 20th century semiotics, and an inside introduction to the facilitator-par-excellence of the field/approach/perspective/metadiscipline. Anyone not experiencing Tom in action might assume him to be a figurehead coasting on past merits. For the rest of us, Tom whirl-winded into our minds, meals, and calendars, and whipped us into other dimensions of space and time and at greater velocities and productivities, with never a gasp or groan, because, above all else, Tom and his ideas were addictive fun.

Tom as figure and ground

That Tom was trained as a linguist only compelled him to peek to the other side, to what might be unsaid or falsely claimed, to what might accompany speech, and to what might exist independently of or contrary to it. That Tom was trained as an anthropologist provoked him to look more closely at other cultures; while his avocation as *biologist manqué* provoked him similarly to look closely also at species other than our own.

Those other cultures and languages, to my later astonishment, included the Saami, my own most enduring of fieldwork projects with reindeer-herders in Norwegian Lapland. Tom spent a shorter time in Finnish Lapland. This is quite a coincidence, when one considers how very few have researched in this area.

Verbal and nonverbal communication, for Tom, figured both as medium and as message, both form and content. Tom could rely on words, pictures, diagrams, and gestures in his disquisitions on alloprimate communication research, and on nonverbal joke lines. He could take a single line or a single cartoon and put it through its semiotic paces just as deftly as he could analyze an entire discourse or corpus. As a scholar, Tom was among the earliest to interrogate and integrate the psycholinguistic, paralinguistic, and gestural in communication, and he pondered

the glottocentric centering of the verbal, making it imperative to render the nonverbal as a marked term (Anderson 2005). We have no way to refer to the nonverbal without bringing in the sometimes irrelevant ‘verbal’. Admittedly, some nonverbal accompaniments to speech, and the visual gestural languages of the deaf, are, while nonvocal, indeed verbal (in the sense of syntactic).

Quitting cold-turkey

Tom Sebeok, the indefatigable anthropologist, linguist, and above all, semiotician, ratcheted his velocity up into another realm by several orders of magnitude when he died at 81, in 2001. Sandwiched between *Festschriften*, his publications continued thereafter. The many obituaries, including my own two efforts (Anderson 2003a, 2003b), followed like so many blind-mouse-ethnographies in elephant-land. A decade later, my thoughts are still adrift as so many specks in a maelstrom of recollections, feelings, and speculations associated with Tom. Perhaps the present essay and volume will allow more senses, and sense, and more satisfactorily tackle the phenomenon of Tom, the first truly global semiotician and master mid-wife in all our professional lives.

Speaking for myself, Tom’s plastic and elastic mind stretched my imagination, without effort on anyone’s part. Given his brilliance and diligence, and his headstart in the last century, as well as every 04:00 AM since, It’s fortunate that there’s anything left for the rest of us to ponder! Here the balloon analogy serves quite well, as Tom must have known with confidence: the greater the accumulation of content (including hot air), the greater the surface exposed to inquiry.

References

- Anderson, Myrdene
 1992 “Review of *Semiotics In the United States*, Thomas A. Sebeok”,
Journal of Linguistic Anthropology 2.2, 223–225.
- Anderson, Myrdene
 1998 “Pricking trickster”, *The American Journal of Semiotics* 14.1–4,
 216–221.
- Anderson, Myrdene
 2000 “Y2K, a self-disorganizing trickster”, *Semiotics 1999* (New
 York: Peter Lang), 435–443.

- Anderson, Myrdene
 2001 “A trickster of, by, and for our time: Y2K from conception to postmortem”, in *Trickster and Ambivalence: The Dance of Differentiation*, ed. C.W. Spinks (Madison, Wisconsin: Atwood Publishing), 135–142.
- Anderson, Myrdene
 2003a “Obituary: Thomas Albert Sebeok (1920–2001)”, *American Anthropologist* 105.1, 228–231.
- Anderson, Myrdene
 2003b “Celebrating semiotics’ pioneer, pathfinder, mentor, midwife, Pied Piper, King Midas, gold standard, magician, troubador, trickster, friend, Tom’,”. *The American Journal of Semiotics* 17.4, 319–331.
- Anderson, Myrdene
 2005 Nonverbal communication. *Encyclopedia of Language and Linguistics* (2nd ed.; Oxford: Elsevier), Volume 8, article 1432.
- Anderson, Myrdene, John Deely, Martin Krampen, Joseph Ransdell, Thomas A. Sebeok, and Thure von Uexküll
 1984 A semiotic perspective on the sciences: Steps toward a new paradigm. *Semiotica* 52.1/2, 7–47.
- Sebeok, Thomas A.
 1991 *Semiotics In the United States* (=Advances in Semiotics; Bloomington: Indiana University Press).
- Sebeok, Thomas A., Alfred S. Hayes, and Mary Catherine Bateson, Editors
 1964 *Approaches to Semiotics: Cultural Anthropology, Education, Linguistics, Psychiatry, Psychology* (=Transactions of the Indiana University Conference on Paralinguistics and Kinesics, *Janua Linguarum*, Series Maior, 15; Berlin: Mouton. Reprinted 1972).
- Sebeok, Thomas A., and Rosenthal, Robert, Editors
 1981 *The Clever Hans phenomenon: Communication with horses, whales, apes, and people* (Annals of the New York Academy of Sciences, 364; New York: The New York Academy of Sciences).
- Sebeok, Thomas A., and Jean Umiker-Sebeok, Editors
 1980 *Speaking of Apes: A Critical Anthology of Two-way Communication with Man* (New York and London: Plenum Press).
- Uexküll, Jakob von
 1940 “Bedeutungslehre”, *Bios* 10 (Leipzig: Johann Ambrosius Barth); trans. from the German by Barry Stone and Herbert Weiner as “The Theory of Meaning”, *Semiotica* 42.1, Guest-Edited by Thure von Uexküll, 25–82.
- Uexküll, Thure von
 1982 “Meaning and science in Jakob von Uexküll’s concept of biology”, *Semiotica* 42.1, 1–24.

Chapter 3

When anecdotes are no longer what they used to be

Lisa Block de Behar

Anecdotes are common in informal conversations, where spontaneity dominates over convention; among other aims, they play a substantial role in creating an atmosphere of complicity when we share impressions about a personality or the incidents of a particular situation. Closer to secret histories or to a brief account of biographical casual events, anecdotes are not quite pertinent in a strict paper, but I would still like on this occasion to recall more than one, keeping in mind that in this case “anecdote” refers not only to the narration of an irrelevant event or the frivolities of a passing circumstance, but also to a less known sense of the term, a sense that refers to its original meaning, the Greek *an ekdotos*, literally “inedit things”. I do not know if by recalling these things I will contribute in some way to putting together the pieces of the puzzle which each individual person is, making room, just this once, for a gathering of “mosaic fragments”, trying to reconstitute some biographical aspects of Thomas A. Sebeok, as if those discontinuous episodes were a part of *l’homme même*, as was so often said about other stylistic or rhetoric peculiarities.

On several occasions, in his conferences, his debates and conversations, Tom made reference to the golem, that character not at all strange to the mythology of Central Europe, his homeland, although I don’t know if this Jewish folk legend was as well-known in Budapest as it was in Prague, Vienna and what used to be the surroundings of the Austro-Hungarian area. The golem was a topic in the works of Borges, of Umberto Eco, of so many scholars and writers, theologians, scientists, film-makers, and creators in all the arts and all times, and Tom warned his audience about the need to study what he was not the only one to call “the Golem Effect”. It would be impossible, knowing Tom’s literary interests and knowledge of Borges’ works as well as the enormous resonance of this author’s writings, not to associate these investigations to “The Golem”, a poem which Borges considered more significant than any of his other works. He always disregarded all the outstanding achievements that are his poems, stories, essays, to the point of wishing them to disappear provided that this single piece should remain as his only surviving work, a decisive wish, as enigmatic as it is desolating.

Among the many projects that abounded in those days, I suggested to Tom that he should give a lecture or write an essay on that sinister character and the effects that aroused such an entity, presumably invented by a rabbi, a teacher who knows about Scriptures and who assimilated the golem to some sort of divine work, thus making this creature a being featured after a human's own image.

Immediately, without hesitation, Tom answered: "You will do it". And every time we met, as a sign of good will, Tom insisted on this presage or order, asking: "Why would Borges want "The golem" to survive? Why only "The Golem"?" And I wondered why Tom would insist on finding this out. So it was that, in his presence, I jotted down some notes on that subject of Jewish popular imagination that animates a being through knowledge, to present at the University of Lugano in May 2001. It is an old legend that gave its name, by means of technological developments, to a mechanism that moves automatically or to an artificial language. In those days, already certain of his imminent and definitive departure, Tom was still proposing projects, suggesting activities, briefly commenting on some events, celebrating with humor a meeting in a city to which Borges had dedicated one of the beautiful pages of his *Atlas*:¹

Junto a las palabras que dicto habrá, creo, la imagen de un gran lago mediterráneo con largas y lentas montañas y el inverso reflejo de esas montañas en el gran lago. Ese, por cierto, es mi recuerdo de Lugano, pero también hay otros.

Once and again, Borges re-appeared like a leitmotiv in our conversations, and Tom remained intent on disclosing the mysteries of a heuristics whose outline he had foreseen and upon which he never ceased to improvise with as much lucidity as grounding.

Why would Borges hold on to the survival of that poem when he had written so many others whose disappearance he did not regret? Why does he include an encyclopedic entry, "The Golem" (Borges 1979), among the Imaginary Beings in his book, among exotic or fabulous animals, monstrous and legendary characters from the four corners of the planet? With a vague sort of humor, Tom answered briefly, not wanting to give

1. Borges 1984: 46: "Along with the words I dictate, there will be, I believe, the image of a great Mediterranean lake with long, slow mountains, and the inverted reflection of these mountains in the great lake. That, of course, is my memory of Lugano, but there are also others."

the solution to a mystery probably destined to remain such, like so many other mysteries. Perhaps this plural riddle, the golem and Borges' decision, is the emblem of a single continuity:

Los artificios y el candor del hombre
No tienen fin . . .²

If, in modern Hebrew, “golem” still means “embryo”, “an animal organism in the early stages of growth” but still unborn, this subject, as much as the literary or artistic golem, lies as well at the very centre of Tom's greatest interests. The conjunction of the natural and biological condition of an icon and its artificial nature in one symbol, the risks of imitation are at stake, the crossroads of imagination and wisdom, the links between man and machines, signs, systems and science, the challenge of fiction, the search for truth, the intersection of truth and illusion, among other themes, are recurrent in Tom's work.

The great many attributes his prodigiously lucid nature had been gifted with were multiplied by an exceptional disciplinary background where the natural sciences joined the human sciences in a play of knowledge, an attempt to approach or even reconstitute the unity of language and nature, filling the gap or joining the word and the world in one of the conciliations that this and other symbols foster. Among the many memories and acknowledgments I can think of, I am pleased to evoke one attribute in particular: Tom's aspiration and vocation towards ubiquity, assimilated to the ubiquity of semiotics.

He had a curious relationship with this earthly planet. He himself used to joke about an unusual ability among mortals, “human or otherwise”, which was his capacity to be everywhere and, above all, a sense of never being out of place, no matter where he was. He usually referred to this divine condition as part of his singular and non-religious conviction. “As you know, if it's – as it is written in the Bible – that we humans are made after God's image, in this sense I can consider myself like Him” – he used to say – and he could not conceal the ironic disbelief or disproportion of his assessment. “What I can say is that like God I'm everywhere, and like Him, everywhere but in Bloomington, as it seems to be.” Nevertheless it was in Bloomington where his personal, family, academic and civil address was established, where he exercised his friendly and institutional hospitality. His family, Jean and their two daughters, Jessica and Erica,

2. “The cunning and candor of man/have no end” (trans. Matías Giovannini).

his friends and colleagues, received scholars from all around the World to work on Semiotic matters in the best tradition. He was a generous host with his guests, for whom he felt intellectually and thoughtfully responsible.

Definitively he spent his life traveling, without luggage; lecturing without written notes, participating in round tables, encouraging informal and institutional Semiotic studies, founding semiotic associations, creating journals, publishing series, encouraging others to organize congresses, colloquia and symposia, all over the world. He demanded a disciplinary space for semiotics at least on a par with other disciplines, sometimes even a higher or different hierarchical space for what he conceived as an overarching discipline. However, and so as not to drift too far from the religious field – a field voluntary and extremely strange to him – I’d say that he fulfilled an evangelical mission of sorts. Although he might have found this hagiographic association, that I allowed myself, somewhat distasteful, we cannot but accept that his sometimes exotic itineraries – and, for the sake of equanimity or prudence, I’d rather avoid naming any one place, with the exception of Montevideo – of all places!

His exhausting schedules, the spontaneous disposition with which he accepted invitations from the remotest corners of the planet, and most of all his doctrinal disciplinary preaching, his enthusiastic messages about messages and about communication as the paradigmatic cultural and natural event would not rule out a drastically secular but equally fervent character, possibly related to ancestral travelers committed to the noble responsibility of transmitting their knowledge.

It is not for nothing that what is in Conan Doyle’s book of 1890, *The Sign of Four*, the sacred connotations of the Tetragrammaton – which, according to the austere dictionary of the Real Academia Española, is defined as the “Name of God, which in Hebrew is made up of four letters, as it is in many other languages”, a display of faith which transcends its primary lexicographical aims – becomes *The Sign of Three: Dupin, Holmes, Peirce* in Sebeok’s 1984 book with Umberto Eco. The theories of Charles S. Peirce and the collaboration with Umberto Eco legitimize, besides, the scarcely quantitative displacement that befits the anaphoric rhetoric of titles, which often allude and take shelter in titles of earlier, better known works, perpetuating a strong tradition and incorporating themselves to it. His affinities with Sir Arthur Conan Doyle and his best-known character are present both in his works and these evocations. Why would he recurrently quote “Sherlock Holmes”, another Borges’ poem (in Borges 1985: 49–50), and even translate it himself?

In his frequent and lengthy trips, in his academic attributions in diverse institutions in the United States, Tom met many professors, researchers, authors, the best known among them. He met others that introduced themselves to him spontaneously, to whom he did not need to ask about their personal or professional interests or backgrounds or about their academic aspirations and responsibilities, because in many cases he already knew them. And in many others, he quickly sensed, with uncommon insight, without any need for explanations, the biographical background of his interlocutor.

Generally his topics of conversation did not stray far from the disciplines that constituted his vast knowledge, his rigorous approach made room for the inclusion of the innumerable anecdotes he used to tell, with a precision favored by an outstanding memory that helped him to preserve and share the circumstances of a profuse and qualified academic experience. As I said before, Tom was an erudite who thought erudition was natural or just took it for granted as a necessary attribute. There was a singular and penetrating intelligence in his sharp remarks that did not come from the academy but from other, quite different, circles.

Beyond University duties, in his interminable travels, he used to allow himself a curious diversion, of an intellectual rather than a tourist nature, scientific rather than aesthetic: the circus and circus performances. Even in the cities where, rather than dazzling shows, the circus displayed the pathetic precariousness that often turns laughter into a grin –as befits the forced humor of the clowns–, Tom's obstinacy on attending representations, without missing a single detail, was quite striking, even almost eccentric. Why go to so many circus shows? Why that assiduous attendance to circuses, only to circuses? What spectacular variations justified such constancy? Isn't the circus an autonomous spectacular space, detached from its environment, which tends to repeat its feats wherever it goes? The observation of the expressions of the animals, the gestures of the trainers, the dexterity of both of them, the competence in skills not necessarily rational and the risk in undertaking them, the defiance to the laws of nature through exercises that attempt to impugn the force of gravity or the requisites and risks of speed in reduced spaces, the inexorability of instinct, the temerity of vertigo, the threats of the elements, might be some of the explanations for a different communication he was concerned with. Wile, deceit, magic, were among the professional skills which unquestionably drew his attention. Magic as well? It was one of the less ludic pursuits of his researches, centered rigorously on the behaviour of animals, their reactions, their relationships with other animals, and particularly with

men. The fact that the trainers live together with their wild or tamed counterparts made the circus a privileged source for Tom's studies, in which we may suspect a kind of reserved delight in the show itself, a pleasure that the muse of knowledge does not rule out.

In his ever ethereal or eternal condition where he now belongs, Tom surely feels completely at ease, used as he was to exotic or remote places, whose distances and differences he would celebrate with more ease than surprise. This placeless space could be the one that best suits his ubiquity. His unlimited environment made up of the variety and plurality of cultures, of languages, of the universality of the principles he postulated and discussed, the depth and breadth of his knowledge, the natural way in which he surprised others, and was himself astonished by their surprise.

Among the several films that, after Tom, had him as a character, I would like to mention *Young Sherlock Holmes* (Levinson 1985). Could Sebeok identify himself with Sherlock? Both the first and the last consonants and the vowels propitiate an isoconsonantism and isovocalism that his linguistic eye and his musical ear could not have failed to notice. As is well known, the author of the character, or the first among those who gave life to Sherlock Holmes, was forced to respond to the demands of his readers and resuscitate him, in spite of having already called his literary death. A resurrection that, given Conan Doyle's spiritist experiences and his ectoplasmatic hobbies, was neither unbelievable nor entirely literary:

En Baker Street vive solo y aparte.

Le es ajeno también ese otro arte, el olvido.³

A passionate researcher, Tom would not find it difficult to identify himself with this character who, in connection with Peirce's musings, was a natural part of his world. Like this circumspect detective, Tom also lives in an actuality that is neither present nor real.

Tom's motto could well have been just as laconic as that of the lonely character: "You know my method". Without denying the lightning of abduction, for whose analysis, application and imagination, Tom did so much, trying to prevent the temptations of trivialization or simplification,

3. "In Baker Street he lives alone and apart/It is also alien to him that other art, that is oblivion" ("Sherlock Holmes", in Borges 1985).

which usually haunt curricular subjects. This motto would not clash with his way “of saying or doing with order”, so long as the method should be firstly and foremost a “procedure followed in science to find truth”. Alas, these were the dualities of the method; but how could it be used to cover, without conflict, such contradictory senses?

“You guess it”: as if he had already deciphered the keys to each culture, unveiling their sects and their secret codes, or found in this quest one of the foundations of a universality that was inherent to him and which he was able to discover and rigorously organize as easily as if the eccentricities of the world were natural, and as if it was all the more natural to consider them normal. When he analyses the interest in the knowledge contained in “the book of nature”, Sebeok (1991: 14) recalls and shares Edgar Allan Poe’s “romantic interest”, particularly in “The Gold Bug”, the author’s enquiries into “secret codes, in the hidden meanings of small objects and events”, referring to the use, in olden times, of *semaeologia*, a term which refers to “the secrecy of signs”, attributing it to John Wilkins, another one of the fortunate figures that Borges (1989) has rescued and to which Tom appealed with gusto. He understood that in the past, “Cryptology, the science of secret communications”, was “clearly that branch of semiotics – in its origins, akin to divination – which utilizes codes with a restricted distribution” (Sebeok 1991: 16). Tom anticipated – biographically, emblematically – the development of a world globalization which he theorized in different terms and practiced *avant-la-lettre*, turning “knowledge about”, without excluding it, into pure “direct acquaintance”, making of his fleeting presence his own adventure, of his displacements an event as fluent as the flow of time and the movement of the planets, which the Greeks were right in imagining as errant.

Like the *flâneur* strolling about in a city, lost in the crowd, making a peaceful adventure out of his daily itinerary, turning the environment – both exciting and homely – into his best path, Tom flew all over the world, as if he had already visited the places he was seeing for the first time, as if he never stopped and, at the same time, as if he never lost sight of them: he knew the landscape, he was informed about domestic affairs, he knew what had just happened, what might happen; the world was that “book of nature” that he had read or that he was writing. But, like one –or two– of Jules Verne’s characters, Tom wandered everywhere, a living blend of Phileas Fogg and Jean Passepartout, never blinded by exotic adventures in those countries where the sky is always blue, or by those who blur their landscapes under the thickness of a fog. Tom traveled without baggage, with just one handbag, maybe a parcel tied with frayed

strings, as if he was better prepared to leave in a hurry than to arrive, and, above all, never to settle down.

He accepted without hesitation every invitation to travel, and, at the same time, he made of his journeys his second nature, his natural way of being. We met him with Jean, or with Jessica or Erica, or alone, first in Vienna, in Georgetown, in Imatra, in Berkeley, in Budapest, in Montevideo –at least, twice–, in Buenos Aires, in Mexico, in Barcelona, in Urbino, in Lugano –the last time–, and in other cities, even in Bloomington. No matter where we met, he was always so up to date with the place that one had the impression he had been living there for a long time and that he was planning to stay even longer. Not only did he feel at ease in an unlimited world but he also livened up and organized the place, which would never be the same after he left. His intellectual participation ordered, in passing, the academic and friendly instances with the same energy, equally rigorous and affectionate.

From each university he visited he would gather his impressions, always vivid and interesting, and these anecdotes abounded in his real and in his virtual conversations. This rare ease with which things happened when he was present always surprised me, as did the good humor with which he could turn any adversity into a joke. As if he had never departed, he maintained with frequency and familiarity those conversations he had began in his last encounter with his eventual interlocutor, ironically resuming discussions, attenuating with his humor flaws and misadventures, moderating them so as to neutralize any shortcomings with a witty reply or an illustrative joke.

Wherever he stayed on his trips, some more lengthy than others, the place was transformed thanks to his presence and his discourse, in a common and sparkling reference, a witticism that acquired a mythical dimension; that place was imprinted by a ritual which, without overlooking the circumstances, put differences into perspective, giving his interlocutor a part in the ceremony of universality he performed in each and every one of his dialogues. Tom did not conceal that unusual condition of feeling at home in the world.

Over twenty years ago, I was working at the Hebrew University in Jerusalem. Tom was preparing in those days a trip to the River Plate and we had to coordinate some aspects of the program he would carry out in Montevideo. From Jerusalem I requested a person-to-person call, and when I said I needed to speak with Professor Thomas Sebeok, the international operator apologizing for starting an almost personal dialogue with me, asked: “With professor Sebeok, the semiotician? May I ask you

a few questions?” The questions became comments, the stories lasted a long while, during which we exchanged impressions about his conferences, his books, the remarkable features of an academic personality which exuded with joy of knowledge, the pleasure of knowing and of sharing that knowledge. Tom delighted in the poetic discoveries of etymologies, in puns, the paronomasias, their sounds reserves, multiplying the senses and the wit that multiplies them. Owner of the knowledge and of our acknowledgment, Tom’s grace vindicates from the origins the actions of thinking and thanking, both as one and the same thing.

When correspondence became electronic and via satellite, that ubiquity became even more evident, although somewhat changed. It no longer consisted in the mere suspension of place by the continuity of a lively displacement, but also the suspension of time in the simultaneity of the instant. No sooner did I send him a message than I was receiving his abundant replies. So many meetings, symposia, colloquia, conferences, congresses, so many e-mails crossed in a space which makes of simultaneity a suspension of space, of the instant a fleetingness which can no longer be distinguished from eternity, which is now his timeless time. As Borges said apropos Sherlock Holmes:⁴

Vive de un modo cómodo: en tercera persona.

He has now achieved Thirdness. A verbal status that he would not have disapproved of in the least, given his willing Peircean loyalty in the permanent search for Thirdness, an evident mode of being he adhered to, confirming the inadequacy of Secondness, convinced and convincing that it is the best way to cover all that is in our minds.

References

- Borges, J. L.
1974 *El otro, el mismo. Obras completas* (Buenos Aires: Emecé).
- Borges, J. L.
1979 “El Golem”, in *El Libro de los Seres Imaginarios*, con la colaboración de Margarita Guerrero (Barcelona: Alfaguara, 1979).
- Borges, J. L.
1984 *Atlas*, ed. María Kodama (Buenos Aires: Ed. Sudamericana).

4. “Sherlock Holmes” (in Borges 1985: 50): “He lives in a comfortable way: in the third person.”

- Borges, J. L.
1985 *Los conjurados* (Madrid: Alianza Editorial).
- Borges, J. L.
1989 *Otras inquisiciones. Obras completas* (Buenos Aires: Emecé Editores), Vol. II.
- Eco, Umberto, and Thomas A. Sebeok, Editors
1984 *The Sign of Three, Dupin, Holmes, Peirce* (Bloomington, IN: Indiana University Press).
- Levinson, Barry, Director
1985 *Young Sherlock Holmes*, film (USA).
- Sebeok, Thomas A.
1991 *Semiotics in the United States* (Bloomington, IN: Indiana University Press).

Chapter 4

Ethology and the Sebeokian way from zoosemiotics to cyber(bio)semiotics

Søren Brier

My friendship with Thomas Sebeok¹ came about from a 1991 meeting of the Danish Society for the Semiotics of Nature (Dansk selskab for naturens semiotik). DaSeNaSe it was called. This was a society that Jesper Hoffmeyer had formed for a group of semiotically interested researchers, mainly from the natural sciences, that had a common interest in Peirce's semiotics. Claus Emmeche and I were the two strange biologists with an interest in philosophy and theory of science inspired by Jesper Hoffmeyer's early work in this area. The core of this group later turned into what people outside Denmark have called "The Copenhagen School of Bio-semiotics". Our acquaintance was based on a series of interdisciplinary seminars that started in the beginning of the 1980s, when I was at the "Psychological Laboratorium" at Copenhagen University. The meeting we later named "the Helmuth Hansen meeting", after a philosopher at Copenhagen University who died in 1987 but had been the driving force for this kind of meeting already back in the 1970s.

Important here also were the Peircean physicist Peder Voetmann Christiansen,² who very early on found an inspiration in Peirce's semiotics, and translated the five *Monist* papers into Danish. He was a great inspiration for us all (Brier 1992), along with Frederik Stjernfelt who, in spite of coming from the humanities, had a great flair for the natural sciences. It was at those meetings that we started to read C. S. Peirce's semiotics, and slowly worked our way into the core of a transdisciplinary semiotic thinking crossing the nature-culture barrier. As this semiotic way of thinking slowly crept into Jesper's thinking, adding to his biological and

-
1. I have made a selection of relevant literature by Sebeok following the list of cited references, as background literature. I have chosen to cite throughout Sebeok's article, "The Sign Science and the Life Science" (which can be found at <http://www.chass.utoronto.ca/french/as-sa/ASSA-6-7/Vol3.No6-7.Sebeok.pdf>), because in this article he sums up the main points of his biosemiotics.
 2. See his home page <http://mmf.ruc.dk/~PVC/index.htm>.

Batesonian foundation – and slowly took over as the most important part of the framework for his thinking – Jesper formed the DaSeNaSe for those specially interested in biosemiotics. The meetings were held in a small fishing village off the North coast of Zealand, called Tisvildeleje. The first Tisvildeleje-meeting, 30–31 October 1991, was called “Biosemiotics and Biotechnology”, and some of the participants were Thomas A. Sebeok, Thure von Uexküll, Claus Emmeche, Frederik Stjernfelt, Jesper Hoffmeyer, Peder Voetmann Christiansen, Søren Brier and Svend Erik Larsen.

It was Peder Voetmann who had put me on the track of information science and the problems that science had in trying to become a trans-disciplinary as well as disciplinary cognitive science.³ But before that, I had in 1977 started – inspired by Jesper Hoffmeyer’s critical approach to other parts of biology, an approach unique in Denmark – a Master’s dissertation, analyzing the historical development of the paradigmatic frames behind how Konrad Lorenz and Niko Tinbergen had developed cognitive and communicational models of ethology with a special focus on the motivational aspect of perception of sign stimuli and their release of fixed action patterns or instinctual movements. This is why I remember discussing Lorenz with Sebeok late one night, over a beer in the 1991 Tisvildeleje meeting.

I had never known Lorenz personally, but read some of his more popular books – like *King Solomon’s Ring* – when I was a boy, because my father had some of them and had developed an interest in the animal mind and communication. But Sebeok had known Lorenz personally, and did not much like him. I did not like Lorenz for his support of Nazism in the middle of 1930s. But nevertheless I thought of ethology as a great step forward. We discussed how ethology and biosemiotics supplemented each other. It was also the study of Lorenz’s early papers that brought me to Jakob von Uexküll, the most important precursor for modern biosemiotics. As you can see in Brier 1999, the conceptual interactions between those two researchers interested me for quite a while. My Master’s thesis (*Om adfærdens årsager – The causes of behavior*) was approved in 1979, but never published in English. But I was much later (in 1997), invited by the Konrad Lorenz Institute outside Vienna to give a lecture there. The content of the lecture can be seen in Brier 1998a. This was the common interest that fueled my first discussions with Thomas Sebeok.

3. It was especially the reading of “Information, entropi og udvikling” (“Information, Entropy and Evolution”), published at Fys. Lab. 1, H. C. Ørsted Institute, Copenhagen University.

In the 1960s, Sebeok had several fellowships at the Stanford University Center for Advanced Studies in the Behavioral Sciences. This gave him the opportunity to return to his avocation, biology, and to turn to the study of human nonverbal and animal communication, publishing several seminal volumes on these topics that were important contributions to the comparative study of communication and signification. Among other things he edited the book *Animal Communication* (1968). I had used that in some studies of dolphin communication around 1973–74, that I had made while studying psychology on the side, because I was a bit bored with the biology study. This book turned me to the problem of meaning in animal communication, and how to bridge the gap between behavioral sciences like the radical behaviorism of B. F. Skinner, and the biological science of behavior developed by Niko Tinbergen and Konrad Lorenz, which they called *Ethology*. The publication of Sebeok's *Approaches to Semiotics* in 1964 marked the beginning of the development of a general semiotics that extends beyond human language, which was the way I also wanted to go. Sebeok had established the term "anthroposemiotics" in 1968 to cover study of the human use of signs in language. "Glottocentric" semiotics, as he called it, with a reference mainly to the Saussurian inspired "science of signs" proposed under the name of "semiology". But already in 1963, Sebeok had established the broader term "zoosemiotics" for animal communication. And in 1981 under Sebeok's editorship Martin Krampen published in *Semiotica* the article that introduced the term "phytosemiotics" for study of the action of signs among plants, as well as between plants and animals viewed from the side of the plants. That was indeed a revolutionary step towards a full biosemiotics. Sebeok writes much later (1990: 6):

... the literature of biosemiotics distinguishes among phyto-, cyto-, and zoosemiotics, the latter comprising a specially marked branch, anthroposemiotics, to reflect its predominantly glottocentric emphasis, amounting at times to an obsession. These distinctions correspond exactly to the standard classification of eukaryotic multicellular organisms into the plant, fungus, and animal super-kingdoms, the last including the *animal loquens*.

But let us return to ethology and zoosemiotics. I had studied animal psychology on the side with Count Ivan Reventlow⁴ at the Copenhagen University's Psychological Laboratory, because Reventlow was inspired by

4. See his works in the reference list. His 1970, 1972 and 1977 were the most important inspirations for my work.

Lorenz, Tinbergen, and Kurt Lewin's dynamical psychology. Reventlow had specialized in statistically sophisticated behavioral studies of Sticklebacks, continuing a tradition from Tinbergen and other Dutch researchers. To finish my Masters in biology, which I had started in the ethology department, I had to ask Hoffmeyer to direct it, because the biological ethologist could not understand or accept the philosophy of science approach that I used, even though it was well-known in psychology.

At the time of the evaluation of my dissertation, Reventlow, who was a specialist in animal psychology, was hired by Hoffmeyer to be external supervisor on my biological dissertation, as I had already had several consultations with him. The psychologists – even in the behavioral section – accepted epistemological reflection on historical developments as legitimate. As mentioned above, this was a tradition that Jesper Hoffmeyer had first introduced in biology, but progress was slow in the conservative natural science environment. So after completing my Master's degree there was no place in biology for me to pursue a PhD. Instead, I entered a prize essay competition where the behavioral psychology department had posed one of the questions. It was focused on motivational models in behavioral science, and on how the use of statistical models might help to solve problems and establish a proper scientific psychology. That essay (Brier 1980, but never published) resulted in a gold medal, and paved the way for a three year research grant in psychology at Reventlow's department, which in turn resulted in a Danish publication (Brier 1993), and work used again and again in later papers and the book on Cybersemiotics, published by University of Toronto Press.⁵

Working in a psychology department made it clear for me how both deep and broad the gap was between the natural science and the humanities-social sciences. You could hardly find shared concepts or frames unless you turned completely radical behavioristic. But radical behaviorism was – inspired by logical positivism – on a completely different track than ethology. This was what started me on looking for transdisciplinary paradigms and, through system science and cybernetics, the work of Bateson, Maturana and Varela, and Luhmann brought me to Peirce and the biosemiotics Sebeok and Hoffmeyer were developing.

Now Sebeok's research succeeded in broadening the definition of semiotics beyond human language and culture to encompass human non-verbal communication as well as communication through sign processes

5. *Cybersemiotics: Why Information Is Not Enough*, Toronto: University of Toronto Press, 2008.

between and within all living organisms. This was the approach I was looking for to make a bridge between biology and psychology, where the one wanted to make physiological explanations and the other phenomenological ones in no hope of ever meeting. Sebeok's name is associated with coining the term zoosemiotics in 1963, and this term deals with species-specific communication systems, the signifying behaviors among animals. Zoosemiotics, in Sebeok's own words (1990 p. 6) deals "with both semiosis in the speechless animals and nonverbal semiosis in *Homo*".

Zoosemiotics is concerned more with a synchronic perspective than ethology, which focuses primarily on the diachronic dimension. Combining the two, we agreed, was a very good idea. That would also avoid certain problems in the informational and cognitive science approaches to the transdisciplinary framework, where the basic thought seems to be the necessity to mechanize the mind in order to get a good scientific grip on it.

The connection to the Cybernetic informational worldview

In the last couple of decades there has been a growing interest in making a new transdisciplinary science that could grasp, understand, and manipulate the informational aspect of nature, culture, and technology. Especially a better understanding of the semantics of cognition and the representation of knowledge in texts, compared to the way a computer represents and manipulates linguistic knowledge, has been looked for to improve the technological evolution of the international computer network's ability to handle the semantic aspects of text and speech.

An international program on the *Foundation of Information Science* (FIS) was evolving. In Brier 1997, I argued for my own Cybersemiotic approach to this project, which shortly stated is the following: A truly scientific theory of information, cognition and communication has to encompass the area covered by the social science and humanities as well as biology and the physio-chemical sciences. A genuine *Transdisciplinarity* is necessary if we want to understand information, cognition, and communication in natural, living, artificial, and social systems in a broadly based scientific theory. A way to connect the phenomenological view from within with a theory of behavior and language is crucial for such an enterprise – in short, a theory of signification and information.

In my opinion, we have to look for a theory which is not mechanistic, because our scientific results so far do not support the belief that semantics is mechanistically explainable. The evolutionary view of reality seems to be well-supported by empirical data, and therefore a necessary basis of a

world view. As Prigogine and Stengers (1985) argue and then demonstrate, evolution cannot be understood on a mechanistic foundation, but must be based on a foundation at least as complex as thermodynamics, with a probability function and the irreversibility coming from the second law of thermodynamics concerning growth of entropy. But this is still not enough to make a foundation for understanding the emergence of life and mind (as inner life, emotion, will, and qualia).

But, at the same time, the debate about how to define information has led deep into the question of the nature and limits of scientific knowledge, and what kinds of reality we are dealing with. To formulate cognitive and informational science frameworks is to go deep into the philosophical foundation of science, especially the epistemological aspect. This will eventually lead to the biological foundation of embodied cognition and communication, and the problems in any form of information definition that avoid this foundation. On the other hand, idealistic transcendental phenomenological views like Husserl's, social constructivistic or alternative radical social constructivistic epistemology, seems unable to account for the genuine aspect of reality that science has uncovered and the connection and continuity between nature and culture (discussed in Brier 1993b and 1996b). Based on our personal and intersubjective experiences with forces such as gravity and electromagnetism I find it necessary to hold on to some kind of realism.

By coining the three terms of phytosemiotics, zoosemiotics, anthroposemiotics, corresponding to the traditional division of living nature into plants, animals, and humans, Sebeok was on the track of making a new transdisciplinary foundation for a naturalized epistemology. The collective term for that vision of Sebeok's that sign-science and life-science are coextensive is *biosemiotics*. Sebeok went so far as to consider the action of signs as the criteria of life. He wrote (1990: 3):

... I juxtapose, as a framing and heuristic device, "sign science" with "life science". The latter is a general phrase "comprehending all the Sciences . . . that have to do with the structures, performances and interactions of living things. . . . Ten years ago, I noted a liberation in the annals of semiotic inquiry between two seemingly antithetical tendencies: a major tradition, in which semiosis is taken to be a steadfast, indeed bedrock, hallmark of life; and a minor, predominantly glottocentric trend, in which semiosis is tied to human existence alone. As a matter of personal conviction, I then declared myself in the former camp, stating that "the scope of semiotics encompasses the whole of the oikoumene, the entirety of our planetary biosphere", adding that semiosis "must be recognized as a pervasive fact of nature as well as of culture.

As we also find it problematic and unnecessarily complicated to establish a non-empirical qualitative different mental world and have to explain how that can have causal influence on matter, I want to adhere also to a monism, viewed as the general scientific idea that everything in the whole Universe, has – at least from the beginning – been developed from the same “stuff”. But as a traditional physicalistic understanding – may it be deterministic, as in classical physics, or probabilistic, in thermodynamics and cybernetics – of this “stuff of the world” is too reductionistic to explain life and mind, I also find the attempt to explain life and mind away in an eliminative materialism paradoxical and self-refuting (Churchland, Smith 1986, Churchland 1995). With Peirce I therefore prefer the Aristotelian concept of ‘hyle’, a continuity or field idea of matter. First, it brings us closer to the quantum field framework; and second it opens to the – for present science obscure – idea that matter can have an internal aspect of life and mind. This is what Peirce calls ‘pure feeling’. I do not think that Sebeok found it attractive to delve much into this aspect of Peirce’s philosophy to determine to what extent it was necessary as a framework for biosemiotics.

Sebeok, Cybernetics & Human Knowing

In 1992 I had started the journal *Cybernetics & Human Knowing*, in cooperation with the *American Society for Cybernetics* supported by the president Fred Steier and Heinz von Foerster, Maturana and Varela, Klaus Krippendorff, and Ernst von Glasersfeld, to mention a few of the principals involved. Around 1994 I was thinking of slowly and carefully introducing semiotic thinking to the cyberneticians and systems people, who in general did not know much about semiotics, and often confused it with the analytical philosophers use of the concept of logical symbols, or with French structuralistic semiology.

I met Sebeok in person at the Fifth Congress of the IASS/AIS June 12–18, 1994, *Semiotics Around the World*, at Berkeley University in California, and asked him if he was willing to help me with that introduction by supporting the journal with his name. as his old friend Heinz von Foerster had already done. He said yes, and gave me a warm greeting to convey to Heinz, who I was going to see at the International Society for the System Sciences Thirty-Eighth Annual meeting, “New Systems Thinking a New Century” June 14–19, in Asilomar, Pacific Grove, California. I left the semiotic conference after two days and traveled to the systemic conference,

where I met Heinz, who was glad to hear from Sebeok and to learn of Sebeok's approval of my idea for the journal, which Heinz himself had supported from the start.

Thus, by joining the effort from the latest development of cybernetics and ethology with Peirce's already transdisciplinary semiotics, the start of the cybersemiotic framework for information, cognitive and communication sciences was laid. This project also aims to conceptualize the anticipatory dynamics of all cognition in a paradigm other than the information processing paradigm. There is an active anticipatory element in all perception and recognition. It is not a pure mechanical process. Perception and cognition is an active process deeply connected to the self-organizing dynamics of living systems and their special ability to be individuals.

Knowledge systems thus unfold from our bio-psycho-socio-linguistic conscious being. Their function is to orient us in the world and help us act together in the most productive way, but they do not explain us to ourselves. Peirce's view, that we cannot split the concepts of mind and matter, is very sound, and a profound basis from which to begin. I do not see any good reason why the inner world of cognition, emotions, and volition should not be accepted as just as real as both the physical world and the cultural world of signs and meaning. Embodied life, even single-celled life, is a basic component of constructing reality. We are thinking in – or maybe even with – the body. The psyche and its inner world arise within and between biological systems or bodies.

Employing Peirce, one may claim that there will always be some type of psyche in every kind of biological autopoietic and dual code system. Nevertheless, a partially autonomous inner world of emotions, perceptions, and volitions only seems to arise in multi-cellular chordates with a central nervous system. Lorenz (1973) argues that such a system with emotions and experiences of pleasure is necessary for animals to have appetitive behaviors that motivate them to search for objects or situations that elicit their instinctual behavior and release the motivational urge built up behind it. This is qualitatively different from how reflexes function on a signal, which is on a proto-semiotic informational level. The signs of instincts function on a genuine semiotic level.

To make a realistic, evolutionary, and non-mechanistic cognitive science was actually what Lorenz and Tinbergen set out to do when they created the science of "Ethology". From the beginning in the 1930s ethology was based on the three theoretical foundations of modern biology: The theory of evolution, the ecological theory and modern population genetics plus,

the method of comparative anatomy transferred to instinctive movements (Lorenz 1970–1971). From this foundation Lorenz and Tinbergen in particular developed a theory of innate release/response mechanisms fueled by specific motivational energy and released by innate sign stimuli. Although the theory is very compatible with Freud's psychoanalytical theory, it was never able to deal with the phenomenological aspect in a theoretically consistent and constructive way (Brier 1993b, 1998a).

What is interesting and fruitful about Lorenz's biological theory of animal behavior is the attempt to develop a cognitive science based on biological theory surpassing, on the one hand, the reductionism based on the mechanisms of physics and chemistry and, on the other hand, the vitalism of Driesch and others. Both Lorenz and Tinbergen were aware of the fact that animal behavior is largely inherited. A good theory of genes was not available at the time, but heredity was well known and supposed to have a material basis in the chromosomes, and population genetics was under development. Morphology was well studied, and according to the Darwinian paradigm it was studied from the angle of survival value of animal behavior. One of the puzzles was how animal behavior and learning could at the same time be hereditary and purposeful. There was no doubt that animals had a selective perception, and related to certain events as biologically meaningful to their survival when they appeared in certain situations, depending on the animal's mood. But neither Lorenz nor Tinbergen managed, in my opinion, to formulate the needed integrative evolutionary-ecological theory for cognitive science that could be an alternative to the objectivism of modern cognitive science and its information processing paradigm (Lakoff 1987, Brier 1992, 1996b).

They did manage to make a theory of genetic preprogrammed behavior and learning, showing how perception was dependent on specific kinds of partly self-energizing specific motivations that were also regulated by age, sex, physiological needs, and time of the year. But especially the foundation of the concept of motivation and its relation to emotions and consciousness has not found a broadly accepted form (Hinde 1970, Reventlow 1970, Brier 1980). This has limited its usefulness in the human sphere, and most ethologists do not use the concept anymore. But at least a new 'cognitive ethology' has been developed by Mark Bekoff (Colin and Bekoff, 1997; Bekoff, Mark, Allen, Colin, and Burghardt, Gordon M. 2002.). It recognizes the inner life of animals as a causal factor, but unfortunately only argues for its existence from the common traits of humans and animals and observations of animal behavior, and like Lorenz fails to develop a new theoretical framework to sustain and

develop its scientific concepts. Among other things, this is what I hope to accomplish with my Cybersemiotic framework.

A very important conclusion in Lakoff (1987) is that our biology is decisive for the way we formulate concepts and make categorizations. He points out that linguistics lacks a broader theory of motivation based on embodiment to understand how we extend metaphors from the concrete to the abstract in a meaningful way, and to explain how we organize concepts into different types of categories. He points out that cognitive models are embodied, or based on an abstraction of bodily experiences, so that many concepts, contents, or other properties are motivated by bodily or social experience in a way that goes beyond the usual linguistic idea of motivation. Only in this way do they make sense, thereby providing a non-arbitrary link between cognition and experience that is not logical in the way we usually understand logic. This means that human language is based on human concepts that are motivated by human experience. It is easier to learn something that is motivated than something that is arbitrary or merely logically arranged. One of Lakoff's conclusions is that motivation is a central phenomenon in human cognition, especially in categorization. Lakoff also points out that motivational categorization in humans is based on idealized cognitive models (ICMs) that are the result of accumulated embodied social experience, and gives rise to certain anticipations.

This fits very well with the ethological thinking around concepts like sign, stimuli and, imprinting (Brier 1995 and 1998); but unfortunately its very physiological and energy-oriented models of motivation, cognition and communication are not developed enough to encompass the area from animal instinctive communication to human linguistic behavior. A further development is needed, one that focuses more on signification and communication. From the other end, it is a problem that Lakoff develops only in a rather simplistic model of bodily kinetic-image schemata as the source of metaphor a metonymy. I tend to think that one could develop the theory much further if one also drew on a combination of ethological and psychoanalytical knowledge of the connection between motivational states and the cognition of phenomena as meaningful signs.

Sebeok's approach

What especially inspired me in Sebeok's approach was his later decision that zoosemiotics rests on a more comprehensive science of biosemiotics.

This global conception of semiotics – namely, biosemiotics – equates life with sign interpretation or mediation. Although biosemiotics is already prefigured in Jakob von Uexküll’s *Umweltlehre*, Sebeok fruitfully combined the influences of von Uexküll and Charles S. Peirce, to merge them into an original whole in an evolutionary perspective, arriving at the thesis that symbiosis and semiosis are one and the same. Biosemiotics finds its place as a master-science which encompasses the parallel disciplines of ethology and developmental psychology. As Uexküll was one of Konrad Lorenz’ most important teachers, it is no wonder Uexküll’s research program was almost identical with that of ethology, except for his lack of belief in evolution.

The empiricist and natural science readings Sebeok offers for communication were new to the semiotic field. References to animal models are made throughout his work in the context of ethology. The approaches of ethology and sociobiology have been controversial and, in their applicability to human culture and society, accused of reductionism. Sebeok shows that some of this controversy may find itself played out in the new trans-disciplinary framework of biosemiotics. In 1992, he and his wife Jean Umiker-Sebeok published *The Semiotic Web 1991* as a volume titled *Biosemiotics*. This volume was predicated on a book they edited in 1980, *Speaking of Apes*, that presented a detailed critical evaluation of current investigations of the ability of apes to learn language. Sebeok showed, in a profound critique of the way the experiments were constructed, that it is very doubtful that apes have such capabilities. This work and its profound consequences are summed up and developed further in Sebeok’s book, *Life Signs* (2000). Thus, biosemiotics does not entail that there are no significant differences between man and apes. On the contrary, Sebeok argues (1990: 8)

that language emerged as an evolutionary adaptation over two million years ago, in the guise of a mute semiotic modeling system—briefly, a tool where-with hominids analyze their surroundings—and was thus present in *Homo Habilis* and all successor species. Speech, the paramount linear display of language in the vocal-auditory mode, appeared as a secondary exaptation probably less than 100,000 years ago, the minimum time required to adjust a species-specific mechanism for encoding sentences with a matching mechanism for decoding and interpreting them in another brain. The fine-tuning process continues. The overall scenario sketched out in that article is in good conformity with Thom’s (1975: 309–311) judgment about the double origin of language, in response to two needs, one personal – “aiming to realize the permanence of the ego” – and the other social—“expressing the

main regulating mechanisms of the social group”. And it is likewise so with Geschwind’s equivalent view (1980: 313) “that the forerunners of language were functions whose social advantages [that is, communicative function] were secondary but conferred an advantage for survival [that is, the modeling function].

This – the creation of an Umwelt or signification sphere – is the semiotic base for the development of communication, including language (as linguistic communication) in humans.

Anticipatory behavior in animals

Based on the results of ethology, I propose that all perceptual cognition is anticipatory (Brier 1993b). As can be seen in the ethological model of instinctive reaction in figure 1, the fixed action pattern that is the behavioral part of the animal instinct is only released by the innate release mechanism if motivationally borne pattern recognition appears.

The perceptions that release the more or less hereditary innate release response mechanism, if it is properly motivated, are called *sign stimuli*. Ethology enumerates many different motivations, some of them species specific (Brier 1993b). Most living systems have great problems in perceiving something not biological, psychological, or socially anticipated. So, from an ethological point of view, one should include the action of the subject and its motivational value into a model of the dynamics of behavior. This brings ethology’s theoretical framework close to the crucial concept of intentionality in Husserl’s Phenomenology. It therefore makes sense to view animal instincts with their specific motivation for fight, mating, hunting etc., as bio-psychological expectations or anticipations.

Some of these anticipations are completely innate, such as the hunting and mating behavior of the digger wasp which has no contact whatsoever with its parents. It gets out of its egg buried in a little cave under the surface of the ground and eats the prey put there by its mother. It does not encounter other species members in its larval stage, and nobody teaches it anything. Still, the wasp is able to hunt and mate when it meets the relevant other living systems. So this is a rather closed, inheritance-based system.

Some behavior systems in other species are partly open for variations in what is anticipated, as for example in the imprinting of ducklings, who will follow the first big moving object expressing sound that they see

within a certain time span after they have hatched, and later on they will choose a mate-like first object. Many birds have a basic song, but have to listen to other members of the species to learn the full song; yet they will not learn the song of another species. But again some bird species can include the song of other species and various natural sounds, and can make different kinds of variations – some even as ongoing improvisations.

It is clear to Lorenz that emotions have functions and survival value. Wimmer (1995) gives a further development of this kind of science about emotion, which one can also find in a cybernetic version in Bateson's work (1972), where emotion is viewed as inter-individual relational logic. But the problem is that Bateson's description is still a purely functionalistic description, not really able to explain how certain things and events become significant for the living system in such a way that the living organism sees them as a sign for something emotional, existential, and vital for their self-organized system (Brier 1992).

The crux of the matter is the problem of the relation of motivation, intentionality, and feelings to the experience of anything as being meaningful. So far, no functionalistic model of explanation of behavior, perception, and communication can alone account in a sufficient way for the willings and emotions of the minds of animals, including human animals. This problem is also crucial in the discussion of what information is, and what the foundation of information science should be. The foundation of meaningful experience, categorization, and communication is the crucial question that cognitive science needs to solve, as Lakoff (1987), for instance, strongly pointed out.

On one side, we have the mathematical information theory, which, in Wiener's cybernetics, is connected to thermodynamics. Cybernetics integrates the ideas of computing – formalized among others by Turing – and the idea of artificial intelligence and the functionalist information concept, and this mixture is often used in cognitive sciences. Today these trends are united in "The Information Processing Paradigm" (See Brier 1997 for further argumentation and documentation).

On the other side, we have phenomenology, hermeneutics, and semiotics. They are the traditional humanistic disciplines of meaning, signification, mediation, interpretation and cultural consciousness, and their conceptual foundations do not allow them to encompass the areas of science, not even biology.

In science, the universe has generally been considered to consist of matter, forces and energy; but following Norbert Wiener's declaration that 'information is information and not energy or matter', the question

has been raised whether information is a third true constituent of our basic reality as science sees it (Hayles 1999). One of the most clear and outspoken promoters of this view was Stonier (1990, 1992, 1997). I have discussed this idea of a unified theory based on the idea of objective information (Brier 1992, 1996c, 1996d). The main problem perhaps is that Wiener's view has very little to say about semantics and signification in living systems, as also Hayles (1999) points out.

I discussed this with Sebeok when we met at *Semiotics bridging Nature and Culture* conference in 1997, which was the 6th World Congress of the International Association for Semiotic Studies (IASS-AIS). It was held in Guadalajara, Mexico, Julio, 13–18. Sebeok's attention had then for some time been drawn towards the problem of introducing semiotics into the world of cybernetic machines and into some of the research going on in the National Institute of Standards in the USA. He wanted my work to be used there, and very consciously pointed to it and me publicly at one of the meetings. That boosted my position in the semiotic society, and helped me there in the same way that his good friend Heinz von Foerster had helped me and the journal *Cybernetics & Human Knowing* to be recognized in the American Society of Cybernetics and the ISSS.

Cognitive information sciences, partly based on first order cybernetics, have run into a powerlessness situation in their attempts to find the algorithms of intelligence, informational meaning, and language (Winograd & Flores 1986; Dreyfus & Dreyfus 1996; Searle 1989 and Penrose 1995). This structural approach has great problems with the phenomenon of context and signification, and how they interact. They want to understand everything, including consciousness and meaning, algorithmically (Lakoff 1987), based on the old belief that both the world and the mind are structured mathematically, and that mathematics in the end is the Logos – be it in the One, the Unmoved Mover, the Pure Nature of the vacuum field, or the Christian God. Sebeok was aware of this very early on, in commenting on the short comings of Schrödinger's and Wiener's attempts to define life (Sebeok 1990: 2–3):

This leads to the second query, cogently formulated and addressed in Schroedinger's path-breaking book (1946), *What Is Life? Elsewhere ...* I had occasion to raise this same question, taking Schroedinger's discussion as my lodestar, but also taking duly into account Pirie's strictures (1937), according to which – especially considering borderline phenomena between the inanimate and the animate – such an inquiry may not even serve a useful purpose. The crux of Schroedinger's classic formulation has to do

with the Second Law of Thermodynamics, particularly with the principle of negative entropy, which is often, if hitherto far from satisfactorily, coupled with a notion of information (more accurately, the lack of it about the statistical structure of a semiotic system (cf., for example, Brillouin 1950). In any event, Schrodinger's discussion points to the salience of semiotics in the understanding of life processes; or, as Wiener put it . . . – keeping the common opinion in mind that the subject matter of semiotics is the exchange of messages (that is, time series) – the amount of information is a measure “of the degree of order” which is peculiarly associated with those patterns which are distributed as messages in time.

With Sebeok and Hoffmeyer, I believe that Peirce's semiotics and its ability to be the foundation of a biosemiotics (Sebeok 1979, Hoffmeyer 1996) can establish such a new transdisciplinary foundation for integrating the new results from other more specific disciplines, such as second order cybernetics, cognitive semantics and pragmatic language philosophy. But, like Hoffmeyer, I was also first inspired by Gregory Bateson in my approach to find a new way to understand life as communication.

I found that Bateson (1972), and later on the new second order cybernetics of von Foerster, have developed some fruitful concepts on the self-organization of cognition. Furthermore the concepts of autopoiesis and structural couplings of Maturana and Varela, which were developed in the same tradition, bring us important steps forward. But I also want to show that these are not sufficient to explain how meaningful communication is possible (Fogh Kirkeby 1997). To this end (based on the papers of mine you can find in the reference list) I turn to integrate concepts from Peirce's semiotics which offer an alternative philosophical foundation to mechanistic materialism, on one hand, and pure constructivism, on the other, in the form of an objective idealistic, realistic, evolutionary and, pragmaticistic philosophy.

Bateson's information concept and Maturana and Varela's autopoiesis concept

Bateson (1972) brought cybernetic information science a step further when he laid the basis for second order cybernetics, by stating that ‘information is a difference that makes a difference’! For something to be perceived as information, it has to be of relevance for the survival and self-organization of a living system, and therefore of being anticipated to some degree. Later on, Maturana and Varela coined the term “autopoiesis” to under-

line the organizational closure of the living system, including the nervous system. I have argued (Brier 1992) that this improves and develops Bateson's points by giving a more explicit and cybernetic theory of the observer, while at the same time seeing observation as a cybernetic process where "things" or "percepts" only emerge when they are able to obtain a dynamic stability in the perceptual system. Von Foerster (1984) uses the mathematical functors as an example of the establishment of "eigen values" in the perceptual system. Only eigen functions (recursive function where the results find a stable output) are perceived as stable "objects". Reventlow (1977) coined the term "rependium" for these sudden – often irreversible – reorganizations in cognition that makes us see things as objects (see Brier 1993b for further explanation). Through the perceptual apparatus, the nervous system is perpetually perturbed with stimuli that disturb its own firing patterns; but perception is only possible if structural couplings have been formed in advance in the process of evolution, so that the perturbation of the autopoietic system was in some fashion anticipated.

A way to combine these different concepts and frameworks is to use Peircean biosemiotics to say that perturbations that fall within a structural coupling will generate information inside the system only through generating a sign, or rather as Peirce says it: generate the interpretant that makes the connection between the representamen and the object, which is then seen as an 'object'. What ethology calls IRM and sign stimuli (Lorenz 1970–71) seems to fit very well into this model, the IRM being one kind of structural coupling. Other members of the species are also part of the surroundings, and are again recognized through pre-established structural couplings.

Sebeok argued that the biosphere and the semiosphere are linked in a closed cybernetic loop, where meaning itself powers creation in self-excited circuits. This is a thinking that clearly encompasses ideas similar to those considered in Bateson's thinking and in second-order cybernetics, autopoiesis and enaction theory (Varela).

Maturana and Varela are opposed to the cognitive science concept of information. They oppose the view of organisms according to which "... their organization represents the 'environment' in which they live, and that through evolution they have accumulated information about it, coded in their nervous systems. Similarly, it has been said, that the sense organs gather information about the "environment" and, through learning, this information is coded in the nervous system" (Maturana & Varela 1980: 6). This is not a fruitful approach, in their opinion.

Maturana and Varela are of the opinion that the organizationally and structurally-oriented account of living systems does not require recourse to a conventional notion of “information”, to which they rightly also attach the traditional idea of coding. Maturana and Varela explicitly reject the cognitive view of cognition as the nervous system picking up information from the environment and the conceptualization of the cognitive processes in the brain as “information-processing”. They clearly see that this is what led to the conventional (cognitivist) account of language as “... a denotative symbolic system for the transmission of information”. (Maturana & Varela 1980: 30)

But Maturana and Varela both seem to believe that it is possible to put up a grand theory of life, cognition, and communication on an epistemological basis of biological constructivism. It is important to note that Maturana and Varela’s theory of autopoiesis does not have a phenomenological nor a social-communicative reflected philosophical basis. They acknowledge the inner emotional world of the living systems, but they have no phenomenological or social theory of emotion, meaning, and signification. Maturana is making a biological behavioral theory of love that includes the social, but lacks a concept of communicational meaning and culture. The theoretical construct is based on a cybernetic biology of self-organization, so the only offer of meaning they can give is the functionalistic description of the structural coupling. I think that both autopoiesis and structural coupling are fruitful concepts in cognitive biology; but the foundation of probabilistic cybernetic biology is not transdisciplinary enough to include a theory of how signification encompasses the phenomenological aspect of reality (See also Hayles 1999 analysis).

The answer, seen from the view point of the phenomenological semiotics of C. S. Peirce, for example, is that the structural couplings establish the possibility for semiosis, and are driven by the necessity for autopoietic system to establish a semiotic domain or significations sphere (Uexküll’s Umwelt). Second-order cyberneticians and autopoieticians do not have the triadic sign concept in their theory, and some are opposed to it. But I think that it is possible to fuse the two theories here, as they are both of second-order (Brier 1992). All the elements in Peirce’s semiosis are signs or capable of becoming signs. It is worth noticing that Peirce’s triadic, phenomenological, and pragmaticistic semiosis is very different from the cognitive theories of symbolism that autopoieticians and second order cyberneticians distance themselves from.

The relation I see between the concept and models of ethology, autopoiesis, and semiotics in this case can be shortly summed up like this: It

is the structural coupling that makes it possible for something (a difference, the immediate object), given the right motivation, to create inside the living system an interpretant that discriminates the object/difference as a sign, that is to say, as vital meaningful information that must release behavior (a sign-stimulus triggering an innate releasing mechanism, IRM, which sets into motion a fixed action pattern).

Note that the information concept here is intersubjectively based, but on the other hand is developed in the exchange with the environment through evolution, and therefore has a compatibility with that reality. So Maturana and Varela are right when they say that information is something that is socially ascribed to a process from other observers. It is only through the collective language that we can make the conscious reflection: “I received information from this interaction”. As said above, a framework for cognition, information, and communication must simultaneously take departure in the scientific (objective), the phenomenological (subjective), and the social-linguistic (intersubjective); none of these aspects can be left out. It is important to remember that language is the prerequisite for all science, as well as our biology and our inner world of emotion, meaning, and willings. One must work simultaneously with all three, if one wants to create a general framework for cognition, information, and communication. Second order cybernetics has interesting aspects to offer here.

Second order cybernetics contribution to a bio-phenomenological framework

As an example, Heinz von Foerster (1986), has developed some very interesting thoughts about the dual evolution of biological system and the life-world – or “Umwelt” – to which the biological system gives rise. His theory is closely related to Maturana’s idea of the co-evolution of autopoietic system and environment, but von Foerster’s theory takes an interesting epistemological and ontological turn, illustrating how organisms “carve out” realities of the Universe through evolution.

As we cannot speak, in the theory of general relativity, of an absolute time or absolute space, thus we cannot in von Foerster’s bio-psychological theory of cognitive systems talk of an absolute reality/environment. All systems travel with their own environment, as also von Uexküll pointed out in his “Umweltslehre” (Uexküll 1909 and 1940). Still, both theories retain a vague idea of one Universe, the independent “something” that everything has evolved from. So you might conclude that the universe is not a reality, but a metaphysical construct made by theories produced in

our scientific worlds. But these theories are again based on the cognitive skills we have developed in evolution, which guarantee our survival value and thereby their 'reality'. They have a shared basis with, most of all, the other vertebrates. This is also one of Lorenz' (1970–71) arguments when he points out that Kant's categories have to have been evolved in the evolution of animal species into the human species. So the world might be a construct, but it is all we have, based on millions of years of perceptual experience.

Von Foerster (1986: 87–88) concludes from this type of argument that the stability of our world view and concepts of things and categories is the outcome of a converging pressure for communicability.

This epistemological foundation of second-order cybernetics connects it with important points in Heidegger's phenomenology. The important point from Heidegger (1962) is that as an observer we are always already a part of the world when we start to describe it. We cannot have what Lakoff (1987) calls an "external realism", but only an "internal realism", as we are *in* the world. Our science works from within time and space, as also Prigogine and Stengers (1986) point out. When we start to describe the world, we to a certain degree separate ourselves from the wholeness of the world of our living praxis. A great part of our communication and thinking is not of our own doing. It is biological evolution and cultural history which signifies through us, and, as Karl Popper (2004) has pointed out, history cannot be given a deterministic lawful description. He is here on the same line of thought as Peirce.

Maturana (1983 and 1988) has – in the same line of thinking as von Foerster – pointed out that there is an ongoing interaction between the autopoietic system and its environment. They co-evolve in a non-deterministic historical drift. Organisms that live together become surroundings for each other, coordinating their internal organization and, finally, languaging (not the same as language in the species-specifically human sense of linguistic communication) is created as coordinations of coordinations of behavior.

So there is a complicated psycho-biological development and dynamic-system organization behind cognition and communication. The aspects of the processes of mind which can be modeled in classical logical terms do not seem to have any special position in or control over how the intentions, goals and ideas of the system are created. Furthermore, the elementary processes of which this system consists do not seem to be made of classical mechanistic information processing, but out of a self-organized motivated dynamics.

Communication, then, between members of the same species is, in second order cybernetics, explained as a double structural coupling between two closed systems. Each are internally creating information (von Foerster 1993). As von Foerster (1986) also underlines, the environment is only established through stipulating a second observer. Luhmann (1990 and 1992) has developed this approach into a general communication theory, distinguishing three different levels of autopoiesis: the biological, the psychological and the social communicative. Building on both Maturana's autopoiesis theory and von Foerster's second order cybernetics, Luhmann expands both into a sociological theory not based on the actions of subjects but on communication as a self-organized system in itself. It functions on the basis of and in between psycho-biological interpenetrated autopoietic systems that it uses as environment, because, although the subjects are alive, perceiving, thinking, and feeling, only communication can communicate (Luhmann 1992: 251). The two other systems are silent. It is a wonderful point from Luhmann, although a verbally empty tautology to the effect that "only communication can communicate" is perhaps not the most intelligent way to get across.

What Luhmann means is that human social linguistic communication functions as an autopoietic system with its own internal dynamics partly independent from the psychological system, which acts as its prerequisite. It seems somewhat parallel to the intrinsic dynamics of signs and sign net in Peirce's semiotics and his understanding of the self as a symbol. But in Luhmann the psychological and communicative systems are structurally coupled. There is no direct transference of information between them. The autopoietic communication system differentiates into specific "symbolic generalized media", such as truth, love, money, power, and faith, each with its own digital code simplifying matters and making these forms of social communication very fast and orderly. The main problem with the autopoietic systems concept is that they do not produce meaning in themselves. Communication is supposed to work as differences in a field of meaning, which Luhmann with little success attempts to establish using Husserl's phenomenology.

Luhmann is thus underlining that our mental system is also self-organized and closed around its own organization, although it is still dependent on the functioning of the biological autopoietic system. Even in the social realm, messages are only received if they fall within the anticipated spectrum of structural couplings called generalized media, such as power, money, love, art, science etc. In humans, the complexity of the environment is reduced on the background of meaning (Luhmann 1990 and 1995, discussed in Brier 1992, 1996a, and 2002). Luhmann

attempts to generalize autopoiesis from the biological real where Maturana and Varela defined it to cover both the psychological and the social communicative sphere; and, as argued above, I find this is a more solid approach for a general theory of cognition, information, and communication. But unfortunately he does not develop a profoundly philosophical theory of signification encompassing the phenomenological semiotic sphere. He stays at the social level mostly, somewhat inspired by Husserl's ideas.

Although he uses the concept of meaning and interpretation as active selections as an important part of his theory inspired by Husserl's phenomenology, he does not have a semiotic theory of signification where he deals with the origins of sign vehicles and how they come to obtain meaning through signification (i.e., a triadic relation), as C.S. Peirce does in his semiotics. But the fruitful thing about Luhmann's theory is that social communication is basic in his understanding of cognition and communication from the start. Communication is his basic social concept. Society is a system of communications. Luhmann (1992 p. 251) writes that "I would like to maintain that *only communication can communicate* and only within such a network of communication is what we understand as action created".

Maturana develops his theory in this direction in later years, but it does not have Luhmann's sophistication on the sociological level. All animals live in interbreeding groups, so also in cognitive biology the concept of social communication is vital. As an ethologist, I therefore think it is important to extend Luhmann's underlining of the importance of the social in understanding the application of any signification and communication model to animals by distinguishing between biological and cultural meaning. Biological meaningfulness – which, for example, also dominates humans in spontaneously aggressive or sexual responses – is primarily non-linguistic and emotionally borne.

In ethology, one says that ritualized instinctive behaviors becomes sign stimuli in the coordination of behavior between, for instance, the two sexes of a species in their mating play. So – as it is already in the language of ethology – a piece of behavior, or coloration of plumage in movement, becomes a sign for the coordination of behavior in a specific mood, such as mating. It is the mood and the context that determine the biological meaning of these signs, which are true triadic signs in the biosemiotic interpretation of Peirce's evolutionary semiotics.

Ethologists have never deliberated on the foundations of the sign concept used in their theory, but I think that Peirce's will be the most fitting model, as Saussure never worked with signs outside human language and

culture. Peirce's triadic sign also describes sign processes in the dynamic way that fits with evolutionary biology, and therefore ethology processes. Instinctive sign communication is not completely arbitrarily established, and is presumed to be emotionally significant to the animal (Lorenz 1971–72), which reflexes are not. A sign process needs a representamen, an object, and an interpretant to communicate something about the object to somebody in some aspect, but not all possible representamens are signs. There are, for example, many habits of nature which we have not yet interpreted. Although it is about an aspect of reality (the object), there is no final and true representation. Instead of Kant's 'thing in itself' (which, postulated as unknowable, Peirce dismisses in one place as "nonsense" and in another place as "meaningless surplussage") Peirce operates with a 'dynamical object' (which is precisely something knowable in itself in just the sense that Kant denied) – sometimes even called the "ultimate object" – that is the ideal limit of all the 'immediate objects' that are created through interpretants and interpretant's interpretants worked out through endless time by all scientist. So we do come to know precisely the way things are as subjects existing in themselves through dynamic interactions, but only partially and gradually in a knowledge that grows or can grow over time toward an asymptotic end-point. As Peirce points out, signs exist in communicative societies. Biosemiotics points out that this also includes animal communities, such as, for instance, an anthill, a beehive, a school of fish, or a group of higher apes. The interpretant is created through an ongoing dynamic process in the communicative systems.

The sign represents the immediate object that contains some aspect of the dynamical object. The immediate object is what the sign "picks up" from the dynamical object, and mediate to the interpretant based on the ground. From an ethological point of view, it is the innate motivation (and thereby the whole IRM) that determines the ground – as in Freud, where it is also the (repressed) drive that determined what an entity or a situation is interpreted as.

The concept of ground is an important aspect of Peirce's sign theory that makes it possible to connect it to ethology, on one hand, cognitive semantics, on the other, and finally to the language game theory of Wittgenstein. It is the entrance to the question of context so important in the debate on limitations of AI (Dreyfus & Dreyfus 1995) and to the difference between the immediate and the dynamical object. Ground is a belief habit, an expectation of a pattern, which mediates between the experiences of the past. This past experience is both cultural and biological,

and, as Lakoff (1987) points out, this is what connects concepts with reality. This point is also well established in AI. For example, Tschacher (1997: 170) uses the term that the semantic mapping of a concept is “grounded” in human experience in the real world.

In ethology, it is the motivation that sets the ground and determines what *sign game* (Brier 1995); and within that conceptual scheme a certain color or movement should be interpreted in. As we usually do not accept that an animal’s use of signs has the necessary syntactic structure and semantic generativity to be called language, we cannot call the communicative situations they participate in ‘language games’, as Wittgenstein (1958) does for the human animals. Holding on to the fruitfulness of Wittgenstein’s way of qualifying context in a dynamically social way through his concept of game, I suggest to call what animals do ‘*sign games*’. Though other animals are not linguistic beings – living in the game language – as are human animals, it is the most important point of biosemiotics that they live in both external as well as internal sign games. This is the case for the human body too. Animals are ‘sign borgs’, not quite as cultural products at the human language borg level, but still they – as do all living systems – live in a web of signs.

Biosemiotics thus connects ethological knowledge with second order cybernetics to embodied cognitive semantics, and gives new insight in the combination of biological and cultural experience in the process of signification and communication. What makes this possible is, in my opinion, Peirce’s development of his profound triadic philosophy. We must not forget that we have so far only moved slightly out of a pure functionalistic view of signification, although it is now placed in a second order and evolutionary perspective. We have so far not come up with a foundation for the creation of a world view within which the existence of the phenomenological aspect, first person experience, the value and force of emotion, and the meaning and willing in cognition and communication can be placed in a consistent way. Modern natural scientific world views really do not give room to the psyche as a self-organized causal force, not even in Daniel Dennett’s evolutionary view.

Uexküll, Lorenz, Peirce, and evolutionary epistemology

In 1999 Jesper Hoffmeyer, Claus Emmeche, and I joined Tom Sebeok in Tartu at the Uexküll centre in Tartu, June 7–9, for the *International Conference on Jakob von Uexküll* organized by Kalevi Kull; and from there we

traveled on to Part II at the *International Summer Institute for Semiotic and Structural Studies* on June 10–13, organized by the International Semiotics Institute (ISI) at Imatra Cultural Centre, Imatra, Finland. The Working Session on “Uexküll and Biosemiotics” was also organized by Kalevi Kull. Here I remember we further discussed the differences between Jakob von Uexküll’s and Konrad Lorenz’s theories, and the necessity to reinterpret Lorenz ethology on an evolutionary basis compatible with Peirce’s through von Uexküll’s presemiotic ideas (while avoiding his rather Platonic ideas about Bauplans). I remember insisting also that von Uexküll’s theory should be reinterpreted on the basis of Peirce’s semiotic philosophy to really become one of the foundational pillars of biosemiotics. But Sebeok was not very concerned with the philosophical foundations at that moment, and I remember telling him about the idealistic aspect of von Uexküll’s philosophical framework that he did not know, and from which Tom distanced himself as “rubbish” (recalling Peirce’s similar dismissal of the Kantian frame as “nonsense”). Sebeok’s view was biological, evolutionary, and ecological, and open towards *evolutionary epistemology* (though as no more than a “mid-most target” of semiotics, as he put it, 1991: 2) – a naturalization of epistemology that emphasizes the importance of natural selection as the generator and maintainer of the reliability of our senses and cognitive mechanisms, the “fit” between those mechanisms and the world being guaranteed by the trial and error through evolution. The evolution of scientific theories is also seen as a selection processes, but now only over a historical time scale.

Peirce is neither a materialist nor a mechanistic, and not even an atomist, as he believes – with Aristotle – that the substance of reality is continuous, that signs, concepts and regularities are real, that we cannot remove the mental and emotional from basic reality as we are connected within it (Nature) and as it is connected with us (Mind). But unlike Aristotle, he is also material evolutionist, and he does not believe in classical logic penetrating to the ultimate depth of reality. Like the pre-Socratic philosophers, he believes that Chaos (as Firstness) is the cradle of all qualities; manifests as particulars (in Secondness), and, through habit-taking (as Thirdness), gives rise to order – and not the other way around: complexity arising from simple mathematical order. And he is not a Platonist like Uexküll, as he does not believe in transcendental forms creating and sustaining the forms in time and space. The transcendental in Peirce’s philosophy is vague. Specific forms come about as stabilized phenomena through evolution. They are not pregiven in time and space

in a static system where organisms only develop from potentiality to actuality, as in Aristotle's philosophy.

Through this combination, Peirce gives us one big evolutionary narrative going into the human history of language-borne self-consciousness, and we have left the mechanical-atomistic – and deterministic – ontology and its epistemology of the possibility of total knowledge (the world-formula thinking of Prigogine and Stengers 1980). Evolutionary science is science within time attempting to find relatively stable patterns and dynamical modes (habits). It is not a science of eternal laws. It is a science of the habits of evolution and the meaning they come to have for the living systems created in the process. Peirce does not have an atomistic world view, and his idea of Firstness is continuous, truly complex, and chaotic; and it possesses potentially the primary aspect of both the “inner” and “outer” world. Firstness has a lot in common with the modern idea of the ‘quantum vacuum field’, or space-time geometry fields (Brier 1996e), except that Peirce does not let Firstness be devoid of potential qualia and emotions, as is a basic ontological and epistemological principle in most contemporary views of natural science. His world view is thus fundamentally anti-reductionistic and anti-mechanistic, and truly evolutionary (Brier 1993a, 1993b, and 1996b).

Peirce integrates emotions and qualia from the beginning in his metaphysics, and thereby avoids the present problems of the sciences. In my opinion, many scientists are ruled unconsciously by their basic ontology of a mechanical reality based on a mathematical eternal order. In this view, meaning, emotion, and willing can only get functionalistic explanations, and must in the end be determined as hallucinatory phenomenological processes with no real causal effects on the physiology of the body. How the quality of consciousness should ever be able to fit into any explanations in this paradigm is beyond my imagination. It has never been truly established that mechanicism was an adequate philosophy for biology, especially for ethology (Brier 1993b and 1998a).

The implication of Peirce's philosophy and method is that qualia and “the inner life” is potentially there already from the beginning, but they need a nervous system to get to a full manifestation. The point is that organisms and their nervous systems do not create mind and qualia. The qualia of mind develop through interaction with those nervous systems that the living bodies develop into still more self-organized manifested forms. Peirce's point is that this manifestation happens through the development of the triadic semiosis. We become conscious through the semiotic devel-

opment of the living systems and their autopoietic signification-spheres in sign games for shared communication which finally evolves into human language games. This is the new foundation I suggest that bio-semiotics and evolutionary epistemology can be supported by, and that is are able to integrate recent developments from ethology, second order cybernetics, cognitive semantics, and pragmatic linguistics in a fruitful way through a new transdisciplinary view of cognition and communication.

To combine the ethological, the autopoietic, and the semiotic description, one can say the following: Meaning is habits established as structural couplings between the autopoietic system and the environment. ‘Objects’ are cognized in the environment – through abduction – by attaching sign habits to them related to different activities of survival such as eating, mating, fighting, nursing – what we, with Wittgenstein,⁶ call “life forms” (Brier 1995 and 1996a) in a society (animal, including human animal) and thereby constituting them as meaningful. We thus take a step forward in the understanding of how signs get their meaning and produce information inside communicative systems as we see information as actualized meaning in shared sign or language games. This is an alternative to the transdisciplinary framework based on a concept of objective information existing by itself without any meaning or feeling.

Cybersemiotic framework of information and communication science

The cybersemiotic transdisciplinary framework delivers a bio-psycho-social framework for understanding of signification that supplements and develops the original ethological models of animal cognition. So I claim that perception, cognition, anticipation, signification, and communication are intrinsically connected in autopoietic systems in mutual historical drift in the creation of signification and sign categories. As Lakoff (1987) observed, the relations between categorical concepts are not logical but motivated, having their origins in the basic life forms and their motivated language games.

Living systems are self-organized cognizant anticipatory autopoietic systems. With Spinoza I will say that they have got Conatus! This means that the individuality of life systems values itself through its continuing

6. I am aware of stretching the interpretation of Wittgenstein’s lifeform concept to be somewhat more concrete and divided into smaller parts than usual.

efforts to preserve its own internal organization. But I also think that the knowledge developed in ethology and second order cybernetics can deepen and complement Lakoff's efforts by giving a more profound concept of motivation and a more differentiated view of the experientialist biological basis. For Peirce, the ultimate drive of evolution is love, the law of mind, and the tendency to take habits. It is not a prefixed foundational mathematical order. This view makes a connection between humanities and the natural and social sciences possible, as well as between matter and mind, inside and outside, truth and meaning, causality and purpose, without reducing one to the other.

It is obvious that what we call language games arise in social contexts where we use our minds to coordinate our actions and urges with fellow members of our society. Some of these language games concern our conceptions of nature as filtered through our common culture and language. But underneath that, we also have emotional and instinctual *bio-psychological sign games*. For humans these function as unconscious paralinguistic signs, such as facial mimics, hand gestures, and body positions that originate in the evolution of species-specific signification processes in living systems. Luhmann's theory of the human socio-communicative being, consisting of three levels of autopoiesis, can be used in cybersemiotics to distinguish between:

1. The languaging of biological systems, which is the coordination of behaviors between individuals of a species on a reflexive signal level (following Maturana), or what Lorenz called the level of reflexes that had no need of specific motivations;
2. The motivation-driven sign games of bio-psychological systems; and finally,
3. The language games level of the self-conscious linguistic human in the socio-communicative systems.

A semiotic understanding has thus been added to Luhmann's threefold autopoietic conception, and his theory is placed within Peircean triadic metaphysics. I will develop this further below, as there are also semiotic systems within the body and psychological system and between them that can be pointed out and named for further study. We simultaneously have internal communication occurring between our mind and body. In Luhmann's theory, this differs from what Kull (1998) calls *psychosomatics*, as it is not a direct interaction with culture, but rather only with the psyche. Nor is it merely *endosemiosis*.

Sebeok and endosemiosis

The terms endosemiosis and exosemiosis were both coined by Sebeok (1976:3). *Endosemiosis* denotes the semiosis that occurs inside organisms, and *exosemiosis* is the sign process that occurs between organisms. Endosemiosis became a common term in semiotic discourse (see T. von Uexküll *et al.* 1993) to indicate a semiotic interaction at a purely biological level between cells, tissues, and organs which use chemical, thermal, mechanical, and electrical processes as sign carriers. There are approximately twenty-five trillion cells in the human body have direct or indirect contact with each other through sign processes and only a fraction are known to us. Especially interesting are the sign connections between the nervous, the hormone, and the immune systems. The communicative wholeness of these processes might well be what makes up the human embodied self, out of which consciousness emerge. Sebeok writes (1990: 5–6):

Jerne has proposed (1985: 1058) a model of particular interest to semioticians, including especially linguists, with his claim that the immense repertoire of the vertebrate immune system functions as an open-ended generative grammar, “a vocabulary comprised not of words but of sentences that is capable of responding to any sentence expressed by the multitude of antigens which the immune system may encounter”. The human immune system consists of about 1,000,000,000,000 cells, dissipated over the entire body, excepting only the brain, but the former and the nervous system are known to exercise pervasive mutual sway one over the other by means of two-way electrochemical messages. The metabolic code constitutes still another fascinating set of endosemiotic properties, For example, cyclic adenosine monophosphate (cAMP) acts, in most micro-organisms, as a symbol for carbon-source starvation, or ppGpp acts as a symbol for nitrogen or amino acid deficiency. Without going into details, the conspicuous point to note here is that, while a simple regulatory mode, that is, a direct chemical relationship between regulatory molecules and their effects, is a clear instance of Peirce’s “secondness, or dependence”, the complex mode is an instance of “thirdness, or mediation. . . . The endocrine and the nervous systems, as noted above, are intimately fastened together via signs. As for the neural code itself, semiosis is what neurobiology is all about.

Then what can we call the internal semiotic interaction between the biological and psychological systems within an organism? I call this interaction between the psyche and the linguistic system *thought semiotics*. This is where our culture, through concepts, offers possible classifications of our

inner state of feelings, perceptions, and volitions. In their non-conceptual or pre-linguistic states, these are not recognized by conceptual consciousness (our life world). I shall therefore call them *phenosemiotic processes* (*phenosemiosis*). This is a reference to Merleau-Ponty, where in the *Phenomenology of perception* he speaks of that aspect of awareness that is pre-linguistic, and he claims that there are not yet even subject and object. But it is still semiotic in Cybersemiotic theory.

As the interactions between the psyche and the body are internal, but not purely biological as in endosemiotics, I call the semiotic aspect of this interpenetration between biological and psychological autopoiesis *intra-semiotics*. These terms remind us that we are dealing with different kinds of semiosis. We need to study more specifically the way semiosis is created, the way the action of signs transpires, in each instance. Today we realize that there are semiotic interactions between hormone systems, transmitters in the brain, and in the immune system, and that these interactions are important for establishing a second-order autopoietic system within a multicellular organism. Such an organism is comprised of cells that are themselves autopoietic systems, and these are organized on a new level into an autopoietic system. But we do not clearly understand the relations between this system and our lived inner world of feelings, volitions, and intensions. It appears that certain kinds of attention on bodily functions, such as imaging, can create physiological effects within this combined system. This is partly carried by different substances that have a sign effect on organs and specific cell types in the body (endosemiotics). We also know that hormonal levels influence sexual and maternal responses; fear releases chemicals that alter the state and reaction time of specific body functions, and so on.

This is a significant part of the embodiment of our mind, but intra-semiotics seem to function as meta-patterns of endosemiotic processes. For example, our state of mind determines our body posture through the tightness of our muscles. There is a subtle interplay between our perceptions, thoughts, and feelings and our bodily state working, among other things, through the reticular activation system. There is much we do not yet know about the interaction between these systems. The nervous system, the hormonal system and the immune system seem to be incorporated into one large self-organized sign web. The autopoietic description of living cybernetic systems with closure does not really leave space for sign production *per se*, and semiotics itself does not reflect very much about the role of embodiment in creating signification. Thus, the cybersemiotic solution to this problem is that signs are produced when the systems inter-

penetrate in different ways. The three closed systems produce different kinds of semiosis and signification through different types of interpenetration, plus a level of structural couplings and cybernetic “linguaging”.

Realizing that a signification sphere not only pertains to the environment but also to the perception of other species’ members, cultural and proto-cultural behavior, and perceptions of one’s own mind and bodyhood, I use “eco” as a prefix for the signification sphere when it pertains to non-intentional nature and culture external to the species in question. In inanimate nature, in other species, and in cultural processes, we can observe differences that signify meanings to us that were never intended by the object. Nöth (2001) introduced the term *ecosemiotics* to designate the signification process of non-intentional signs from the environment or other living beings that creates meanings for another organism – for instance, one that is hunting. The sign signifying an organism that is suitable prey is not intentionally emitted by the organism being preyed upon; it is therefore ecosemiotic rather than exosemiotic.

Ecosemiotics focuses on the aspects of language that relate to how living systems represent nature within signification spheres, including language games in culture. Cybersemiotics suggests that the basis of these eco-language games is the eco-sign games of animals, combined with a signification sphere created through evolution. Furthermore, these eco-language games are based on an intricate interplay between the living system and its environment, establishing what Maturana and Varela call “structural couplings”. The signification sphere is a workable model of nature for living systems that, as species, have existed and evolved throughout millions of years. This is also true for the human species, indicating that our language has a deep, inner connection to the ecology of our culture. Any existing culture is a collective way of ensuring a social system will survive ecologically. As such, the cybersemiotic theory of mind, perception, and cognition is realistic, but not materialistic or mechanistic. It builds on the inner semiotic connection between living beings, nature, culture, and consciousness carried by the three Peircean categories in a synechistic and thychistic ontology within an agapistic theory of evolution, thus delivering a philosophy beyond the dualistic oppositions between idealism (or spiritualism) and materialism (or mechanism). The cybersemiotic model provides a new conceptual framework within which these different levels of motivation can be represented and distinguished in ways not possible within frameworks of biology, psychology, and socio-culture. A transdisciplinary framework can be constructed that supersedes some of the limitations of earlier divisions

between disciplines by viewing meaning in an evolutionary light, as always embodied, and by seeing the body as semiotically organized, as in Peirce's triadic worldview where mind as pure feeling is Firstness. This gives us hope that the cybersemiotic development of biosemiotics can contribute to a transdisciplinary semiotic theory of mind, information, cognition, communication, and consciousness.

Arguments for going from cybernetics to biosemiotics

I have been most interested in Heinz von Foerster's second order cybernetics theory of object as eigenvalues and in Luhmann's further use of Maturana and Varela's autopoiesis theory to construct a general theory of social communication as a complementary model to the Peircean. To combine those would give rise to a broader and more modern framework of biosemiotics, which I call cybersemiotics. But as the autopoiesis concept in biology is very close to Uexküll's functional circle model, I will sum up the differences in the last part of this section that quotes from Brier (2003d), but with some improvements. Let me consider the similarities between these perspectives first:

1. As second order cybernetics takes cybernetics and systems research to a new level by including the observer, so biosemiotics takes semiotics to a new level by including all living systems in semiosis.
2. In both cases, this new level is achieved through a bio-constructivism, where all living systems are seen as constructing their own "life-world". In biosemiotics it is often called 'Umwelt', from von Uexküll. Maturana speaks of the organism's 'cognitive domain'. Von Foerster sees a cognitive world constructed of 'eigen values' of the nervous system's cognitive processes. Eigen values are stable systems of recursive processing that stabilize in the mind and enable us to (re)cognize things.
3. In all these systems of thought, the bio-constructivism leads to an idea of 'closure'. The term is mostly used in connection with autopoiesis, but both von Foerster and von Uexküll have clear indications that the 'life world' – or 'signification sphere', as I call it – is all there is for the organism.
4. These theories all agree that there is no stream of 'information' from the environment going directly into the cognitive system of the organism, information that is picked up and gives a more or less 'objective' picture of the "real environment".

5. But there seem to be some limits for the bio-cognitive constructivism. There is an acknowledgement that “reality” or “the environment” exists as some kind of limit that puts ‘constraints’ on the possible ways an organism can exist in a viable way. Maturana and Varela seem, as biologists by training, to operate in some kind of materialistic reality including evolution and ecology. So does Von Foerster, who is most explicit about accepting that the environment has to have energy and structure. Von Uexküll also seems to accept some kind of real world outside the many *Umwelts*, as he calls these ‘subjective worlds’, but in his writing he seems to combine a (cybernetic)-mechanistic and behavioristic view with a kind of Platonism.
6. They all agree that life and cognition are aspects of the same thing. Peirce and Sebeok use the term ‘semiosis’ and ‘signification’ for cognition. But broadly speaking, they are all talking about the fact that life, cognition, and communication coincide.
7. Maturana and Varela, von Uexküll and von Foerster, all discuss what kind of experiences can arise under various circumstance and all use examples that have to do with vision (“What is it to see?” “What the frogs brain tell the frog’s mind.” “Through the eyes of the others . . .”, and so on.). However, none of them provides an explicit theory of the organism’s first person phenomenological experiences, and of the difference between experience and what goes on in the nervous system. Peirce does attempt this, although based on a an old-fashioned model of physiological knowledge.
8. In biosemiotics, Uexküll’s stationary Platonic world view is transferred to Peirce’s evolutionary world view. Through this operation, biosemiotics, second-order cybernetics, and autopoiesis share the evolutionary constructivist view of the origin of organisms, their cognition and ecological ‘niches’ – what Hoffmeyer later has semiotic reconceptualize as ‘semiotic niches’.
9. None of them consider organisms as deterministic machines. But cybernetics and autopoiesis are both more machine-like in their language than is the work of the biosemioticians based on Peirce’s philosophy, though in general biosemioticians have not unfolded Peirce’s philosophy to its full metaphysical extent. Von Foerster, for instance, refers to living systems – including humans – as non-trivial machines.
10. It is not clear if von Uexküll has a phenomenological view of the organism. Be that as it may, neither he, nor von Foerster, Maturana or Sebeok have ‘a theory of mind’ explaining how first person experience

appears in a physical world. However, Peirce does provide such a view in his special version of an objective evolutionary idealism, which is distinctly different from Hegel's. But this is only recently being discussed thoroughly in semiotics, and has not penetrated to biosemiotic circles yet, as many of the biologists want to stay within the traditional biological area and not go for the full version of the biosemiotic view.

Now to the interesting differences that I see among these views, which in my opinion make the construction of a Cybersemiotics both a necessary and a good thing:

1. All three views discussed here more or less explicitly take life as a basic or constituent aspect of reality, and not something invented by chance out of a physical deterministic world. But to me, Peircian bio-semiotics differ from the others in that Peirce's metaphysics explicitly supports this stance. Life and cognition have their source in the pure feeling of Firstness.
2. The concept of 'structural coupling' is unique to autopoiesis, although von Foerster's concept of 'things as cognitive eigenvalues' is close to that, and von Uexküll has a more vague idea of the same. Structural coupling seems to be the prerequisite for generating cognitive Eigen values which make cognitive objects possible. Structural coupling is necessary for the sudden construction of patterns that attain meaningfulness in the perceptual field, such as the 'sign stimuli' in the ethological paradigm of animal cognition, communication, and behavior. I find the concept useful in biosemiotics, to explain how sign connections become established.
3. Maturana and Varela point out that it is the autopoietic character of living systems that makes it possible for them to conserve structural couplings. Through these structural couplings it is possible to establish von Foerster's eigenvalues of cognition. I suggest that this is what Peirce called the Interpretant – that is, the sign in our mind that makes us see/recognize something as a thing. Peircian biosemiotics builds on Peirce's unique triadic concept of semiosis, where the 'interpretant' is the sign concept in the organisms mind that is its interpretation of what the outer sign vehicle "stands for", for instance, that a raised fist is a 'threat'. The question is whether this is contrary to what Maturana proposes, namely, no internal "representation" as such, but rather a continuous flow of configurations within the

nervous system in a closed sensory motor loop in which some configurations become more likely and appear as regularities. Or is this a sufficient basis for the understanding of how an interpretant gets established in a biological system? According to Maturana, a nervous system is a detector of configurations within itself – and these do not take on the “solidity” of “objectness” of interpretants.

4. Peircian biosemiotics is based on Peirce’s theory of mind as a basic part of reality (in Firstness) existing in the material aspect of reality (in Secondness) as the ‘inner aspect of matter’ (a view called ‘hylozoism’) manifesting itself as awareness and experience in animals, and finally as consciousness in humans. Combining this with a general systems theory of emergence, self-organization and closure/autopoiesis, constitutes an explicit theory of how the inner world of the organism is constituted, and therefore how “first person” views are possible and as real as matter.
5. Through this foundation for semiosis, a theory of meaning and interpretation including mind – at least as immanent inside nature – is possible, and cybernetic views of information together with autopoietic views on languaging can be combined with pragmatic theories of language in the biosemiotic perspective (as I am offering models of in forthcoming papers).

Sebeoks’ support

The semiotic conference in Imatra in 2000 was the last time I met Tom. He was already tired then, and seemed to fall asleep in some of the lectures, but suddenly to “wake up” at the end of the lecture with a question. I remember how we were celebrating his 80th birthday. He told me how he loved to get up early in the morning before anybody else was awake in the US, to sit in his pyjamas having his e-mail contact with the Europeans, who had started work at that time. Sebeok went to bed very early and got up very early – and he was a very effective worker. I remember discussing problems in my post-doctoral dissertation that I was finishing in those years. Until late in the evening – long after the early riser that Sebeok was had gone to bed – Marcel Danesi was playing the piano, and we all tried to remember the lyrics to sing to the tunes his fingers kept effortlessly remembering.

From that time on, my contact with Sebeok was via email. Knowing of his mortal illness, he stopped travelling. After my asking several times, he promised to be on the evaluation committee, which is a big thing in

Denmark, already knowing that he would probably not only be able to travel even if we offered him the first class ticket that would be necessary, already knowing that probably he would not last that long. But he put a kind of obligation on his close associates, which was useful for me, as Winfried Nöth read the manuscript through and sharpened my precision in many ways, John Deely took Sebeok's place in the evaluation committee and gave me valuable feedback, and Marcel Danesi helped me to get the improved habilitations-dissertation published by University of Toronto Press and wrote a preface. Paul Copley and John Deely wrote the very fine blurbs on the cover. Thus, even after he died, Sebeok, through the net of influences and tradition for scholarship invested in his younger colleagues, ensured that the support he promised to my work was carried out. Later Winfried Nöth was the first to register Cybersemiotics as a new framework in his *Handbuch der Semiotik*.

In December 2001, the founder and editor of *Semiotica* and the creator of biosemiotics died. Because of my shift from the Agricultural and Veterinary University to the Copenhagen Business School, the whole matter of my *Habilitationschrift* was delayed more than three years, because a dispensation to have this kind of philosophical post-doctoral dissertation had to be given from the ministry. *Cybersemiotic: Why Information Is Not Enough* was approved in March 2006 and came out from the University of Toronto Press in spring 2008.

As I wrote in his obituary (Brier 2003b) in the special issue of *Cybernetics & Human Knowing* we dedicated to his honor (Brier 2003b and d), Sebeok's supportive work is thus behind many of the members of the biosemiotic community. In many ways he nurtured the development of the biosemiotic field and its interaction with information theory, AI, cybernetics, autopoiesis, computer science, and information seeking. He supported my journal and my personal work with Cybersemiotics in many ways. Thus, Sebeok was very supportive in decisive ways of various schools of semiotics and especially of the workers in those schools.

As we see, a great deal of Sebeok's efforts were put into unselfish inter- and transdisciplinary organizational work. He had a modest and sensitive way to help people improve their thoughts and their work, and a unique way of establishing contacts between like-minded scholars from different fields of specialization and different corners of the world which was essential to the establishment of what he finally called global semiotics. Sebeok was able to do this not only because he regularly toured the world, attending conferences and teaching, but because he was the "Mister E-mail" of semiotics. To many he was 'Mister Semiotics', but to us in Copenhagen he will remain 'Mister Biosemiotics'.

References

- Allen, Colin, and Marc Bekoff
 1997 *Species of Mind: The Philosophy and Biology of Cognitive Ethology*. Cambridge, MA: MIT Press.
- Bateson, Gregory
 1972 *Steps to an Ecology of Mind*. Paladin, Frogmore, St. Albans.
- Bekoff, Mark, Colin Allen, and Gordon M. Burghardt
 2002 *The Cognitive Animal: Empirical and Theoretical Perspectives on Animal Cognition*. Cambridge, MA: MIT Press.
- Bohr, Niels
 1954 “Kundskabens Enhed”, in Bohr 1957: 83–99.
- Bohr, Niels
 1957 *Atomfysik og menneskelig erkendelse* (Copenhagen: J.H. Schultz Forlag).
- Brier, Søren
 1980 Prize Essay in psychology about the fruitfulness of hierarchy – and probability – deliberations in constructing models of motivation from behavioral analysis. Awarded with the Gold Medal in psychology of Copenhagen University.
- Brier, Søren
 1992 “Information and consciousness: A critique of the mechanistic concept of information”, *Cybernetics & Human Knowing* 1.2/3, 71–94.
- Brier, Søren
 1993a “Cyber-Semiotics: Second-order cybernetics and the semiotics of C.S. Peirce”, *Proceedings from the Second European Congress on Systemic Science*, Vol. II: 427–436.
- Brier, Søren
 1993b “A Cybernetic and Semiotic view on a Galilean Theory of Psychology”, *Cybernetics & Human Knowing* 2.2, 31–45.
- Brier, Søren
 1995 “Cyber-Semiotics: On autopoiesis, code-duality and sign games in bio-semiotics”, *Cybernetics & Human Knowing* 3.1, 3–14.
- Brier, Søren
 1996a “From Second-order Cybernetics to Cybersemiotics: A Semiotic Re-entry into the Second-order Cybernetics of Heinz von Foerster”, *Systems Research* 13.3, 229–244.
- Brier, Søren
 1996b “The Necessity of a Theory of Signification and Meaning in Cybernetics and Systems Science”, *Proceedings of the Third European Congress on Systems Science, Rome, 1–4 October 1996* (Rome: Edizioni Kappa), 693–697.
- Brier, Søren
 1996c “Cybersemiotics: a new interdisciplinary development applied to the problems of knowledge organisation and document retrieval

- in information science”, *Journal of Documentation* 52.3 (September), 296–344.
- Brier, Søren
1996d “The Usefulness of Cybersemiotics in dealing with Problems of Knowledge Organization and Document Mediating Systems”, *Cybernetica: Quarterly Review of the International Association for Cybernetics* 39.4, 273–299.
- Brier, Søren
1996e “Trust in the order of things”, an extended review *The Ecological System* by Freya Mathews, *System Practice* 9.4, 377–385.
- Brier, Søren
1997 “What is a Possible Ontological and Epistemological Framework for a True Universal ‘Information Science’? The suggestion of a Cybersemiotics”, *World Futures* 49, 297–308.
- Brier, Søren
1998a “The Cybersemiotic Explanation of the Emergence of Cognition: The Explanation of Cognition, Signification and Communication in a non-Cartesian Cognitive biology”, *Cognition and Evolution* 4.1, 90–102.
- Brier, Søren
1998b “Cybersemiotics: A suggestion for a Transdisciplinary Framework for Description of Observing, Anticipatory and Meaning Producing Systems”, in *Proceedings form CASYS97: conference on anticipatory systems. Liege, Belgium: Chaos foundation* (American Institute of Physics Conference Proceedings 437; Berlin: Springer verlag), 182–193.
- Brier, Søren
1999 “Biosemiotics and the foundation of cybersemiotics. Reconceptualizing the insights of Ethology, second order cybernetics and Peirce’s semiotics in biosemiotics to create a non-Cartesian information science”, Special issue on Biosemiotics. *Semiotica* 127–1/4, 169–198.
- Brier, Søren
2000 “Konstruktion und Information. Ein semiotisches re-entry in Heinz von Foersterns metaphysische Konstruktion der Kybernetik zweiter Ordnung”, in *Beobachtungen des Unbeobachtbaren*, ed. Oliver Jahraus, Nina Ort und Benjamin Marius Schmidt (Velbrück Wissenschaft, Weilerswist, 2000), 254–295.
- Brier, Søren
2000 “Trans-Scientific Frameworks of Knowing: Complementarity Views of the Different Types of Human Knowledge”, *Yearbook Edition of Systems Research and Behavioral Science* 17.5, 433–458.
- Brier, Søren
2001 “Cybersemiotics and Umweltslehre”, *Semiotica* 134–1/4, 779–814.

- Brier, Søren
2001 "Cybersemiotics: A reconceptualization of the foundation for Information Science", *Systems Research and Behavioral Science* 18, 421–427.
- Brier, Søren
2001 "Ecosemiotics and Cybersemiotic", *Sign Systems Studies* 29.1, 107–120.
- Brier, Søren
2002a "Intrasemiotics and Cybersemiotics", *Sign Systems Studies* 30.1, 113–127.
- Brier, Søren
2002b "Varela's contribution to the creation of Cybersemiotics: The calculus of self-reference", ASC-column, *Cybernetics & Human Knowing* 9.2, 77–82.
- Brier, Søren
2002 "The five-leveled Cybersemiotic Model of FIS" (Best paper award in its session), in *Cybernetics and Systems*, ed. R. Trapp (Austrian Society for Cybernetic Studies), Vol. 1, 197–202.
- Brier, Søren
2003a "Foreword: Sebeok's Biosemiotic contribution to cybersemiotics", *Cybernetics & Human Knowing* 10.1, 5–6.
- Brier, Søren
2003b "Thomas Sebeok: Mister (Bio)semiotics. An obituary for Thomas A. Sebeok", *Cybernetics & Human Knowing* 10.1, 102–105.
- Brier, Søren
2003c "The Integration of Second Order, Cognitive Biology (Autopoiesis), and Biosemiotics", *Cybernetics & Human Knowing*, 10.1, 106–109.
- Brier, Søren
2003d "The Cybersemiotic model of communication: An evolutionary view on the threshold between semiosis and informational exchange", *Tripple C* 1.1, 71–94.
- Brier, Søren
2007 "Applying Luhmann's system theory as part of a transdisciplinary frame for communication science", *Cybernetics & Human Knowing*, Vol. 14, no. 2–3. Pp. 29–65.
- Buchler, Justus, Editor
1955 *Philosophical Writings of Peirce* (New York: Dover Publications).
- Churchland, Patricia Smith
1986 *Neurophilosophy: Toward a Unified Science of the Mind-Brain* (Cambridge, MA: MIT Press).
- Churchland, Paul M.
1995 *The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain* (Cambridge, MA: MIT Press).

- Deacon, Terrence
1997 *The Symbolic Species: The co-evolution of language and the human brain* (Harmondsworth: Penguin Books).
- Fogh Kirkeby, Ole
1997 "Event and Body-mind. An outline of a Post-postmodern Approach to Phenomenology", *Cybernetics & Human Knowing* 4-2/3, 3-34.
- Foerster, Heinz von
1979 "Cybernetics of Cybernetics", in *Communication and Control in Society*, ed. K.rippendorff (New York: Gordon and Breach Science Publishers), 5-7.
- Foerster, Heinz von
1980 "Epistemology of Communication", in *The myths of Information*, ed. Woodward (Madison, Wisconsin), 19-27.
- Foerster, Heinz von
1984 *Observing systems* (California: Intersystems Publication).
- Foerster, Heinz von
1993 "Für Nikolas Luhmann: Wie rekursiv ist Kommunikation", *Teoria Sociologica* 1. 2, 61-88.
- Foerster, Heinz von
1996 "From Stimulus to Symbol", reprinted in *Event and Cognition: An Ecological Perspective*, ed. V. McCabe and G. J. Balzano (New Jersey and London: Lawrence Erlbaum Associates, Publishers, Hillsdale).
- Hayles, Katherine
1999 *How We Became Posthuman: Virtual Bodies ind Cybernetetics, Literature and Informatics*. The University of Chicago Press, Chicago & London.
- Heidegger, Martin
1962 *Being and Time*, English translation of *Sein und Zeit* by John Macquarrie and Edward Robinson (San Francisco: Harper & Roe).
- Hinde, Robert
1970 *Behaviour: A synthesis of Ethology and Comparative behaviour* (Tokyo: McGraw-Hill, International Student Edition).
- Hoffmeyer, Jesper
1996 *Sign of Meaning in the Universe* (Bloomington, IN: Indiana University Press).
- Kull, Kalevi
1998 "Semiotic ecology: different natures in the semiosphere", *Sign Systems Studies* 26, 344-364.
- Lakoff, George
1987 *Women, Fire and Dangerous Things: What categories reveal about the Mind* (Chicago, IL: The University of Chicago Press).

- Lorenz, Konrad
 1935 “Kumpan in der Umwelt des Vogels”, *J. F. Ornith* 83, 137–213, 289–413.
- Lorenz, Konrad
 1950 The comparative method in studying innate behavior patterns, *Sym. Soc. Exp. Biol.*, 4, 221–268.
- Lorenz, Konrad
 1970–1 *Studies in animal and human behaviour I and II* (Cambridge, MA: Harvard Univ. Press).
- Lorenz, Konrad
 1973 *Die Rückseite des Spiegels* (München: Pieper and Co.).
- Lorenz, Konrad
 1966 *On Aggression* (London: Methuen).
- Luhmann, Niklas
 1990 *Essays on self-reference* (New York: Columbia University Press).
- Luhmann, Niklas
 1992 “What is communication?”, *Communication Theory* 2.3 (August), 251–258.
- Lyne, J. R.
 1980 “Rhetoric and Semiotic in C. S. Peirce”, *The Quarterly Journal of Speech* 66, 155–168.
- Maturana, Humberto R.
 1983 “What is it to see?”, *Arch. Biol. Med. Exp.* 16, 255–269.
- Maturana, Humberto R.
 1988 “Ontology of observing: The Biological Foundation of Self Consciousness and the Physical Domain of Existence”, *The Irish Journal of Psychology* 9.1, 25–82.
- Maturana, Humberto R., and Francisco J. Varela
 1980 *Autopoiesis and Cognition: The Realization of the Living* (Boston: Reidel).
- Nöth, Winfried
 2001 “Introduction to Ecossemiosis” (ISI Congress papers, Nordic Baltic Summer Institute for Semiotic and Structural Studies Part IV, June 12–21 2001 in Imatra, Finland: Ecossemiotics: Studies in Environmental Semiosis, Semiotics of the Bio-cybernetic Bodies, Human/too Human/ Post Human), ed. Eero Tarasti, 107–123.
- Peirce, Charles Sanders
 1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Ficta Disjecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on

the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.

- Penrose, Roger
1995 *Shadows of the Mind: A Search for the Missing Science of Consciousness* (London: Oxford University Press).
- Popper, Karl. R.
2004 *The Poverty of Historicism* (London: Routledge).
- Prigogine, Ilya, and Isabelle Stengers
1986 *Order out of Chaos: Man's new Dialogue with Nature* (Toronto: Bantam Books).
- Prigogine, Ilya, and Isabelle Stengers
1954 *Tendenser indenfor den nyeste; dyrepsykologi, der kan have betydning for personlighedsforskningen* (Masters thesis; København: University of Copenhagen).
- Reventlow, Ivan
1959 "The Influence of Benactyzine on learning in cats", *Acta pharmacologica et toxicologica*, No. 16, pp. 136–143.
- Reventlow, Ivan
1961 "Ethopsychopharmacological research in Denmark" *Bulletin de L'association Internationale de Psychologie Appliquee*, Vol. 10, pp. 118–125.
- Reventlow, Ivan
1970 *Studier af komplicerede psykobiologiske fænomener*; Munksgaard, Copenhagen. Doctoral thesis (not Ph.D.). University of Copenhagen.
- Reventlow, Ivan
1972 "Symbols and Sign Stimuli", *Danish Medical Bulletin* 19, 325f.
- Reventlow, Ivan
1973 "Konfliktforschung im Tierexperiment", in G. Reinert, Editor, Bericht über den 27. Kongress der Deutschen Gesellschaft für Psychologie in Kiel 1970 (Göttingen: Hogrefe).
- Reventlow, Ivan
1977 "Om dyrepsykologien i dansk psykologi og om dens betydning for begrebsdannelsen i psykologien", in *Dansk Filosofi og Psykologi* Bind 2, ed. S. R. Nordenbo and A. F. Petersen (København: Filosofisk Institut, Københavns Universitet), 127–137.
- Reventlow, Ivan
1980 "Etologi" in *Psykologisk Leksikon*, K. B. Madsen (København: Gyldendal).
- Searle, John
1989 *Minds, Brains and Science* (London: Penguin Books).
- Sebeok, Thomas A.
1976 *Contributions to the Doctrine of Signs* (joint publication of Lisse, Netherlands: The Peter de Ridder Press, and Bloomington, IN:

- Research Center for Language and Semiotic Studies of Indiana University).
- Sebeok, Thomas A.
1979 *The Sign & Its Masters* (Austin, TX: University of Texas Press). Corrected 2nd ed. (=Sources in Semiotics, Vol. VIII; Lanham, MD: University Press of America, 1989).
- Sebeok, Thomas A., Editor
1977 *How Animals Communicate* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
1991 *Semiotics in the United States* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
1999 “Biosemiotica I”, together with “Biosemiotica II” Guest-edited by Jesper Hoffmeyer and Claus Emmeche; *Semiotica* Special Issue 127–1/4.
- Sebeok, Thomas A., A. S. Hayes and M. C. Bateson, Editors
1964 *Approaches to Semiotics* (The Hague: Mouton).
- Sebeok, Thomas A., and Alexandra Ramsay, Editors
1969 *Approaches to Animal Communication* (=Approaches to Semiotics 1; The Hague: Mouton).
- Stonier, Thomas
1990 *Information and the Internal Structure of the Universe* (London: Springer verlag).
- Stonier, Thomas
1992 *Beyond Information: The Natural History of Intelligence* (London: Springer Verlag).
- Stonier, Thomas
1997 *Information and Meaning: An Evolutionary Perspective* (Berlin: Springer Verlag).
- Tinbergen, Niko
1973 *The Animal in Its World* (London: George Allan & Unwin).
- Tschacher, Wolfgang
1997 “The perspective of situated and self-organizing cognition in cognitive psychology”, CC-IA, Vol. 13.2–3, 163–189.
- Uexküll, Jakob von
1940 “Bedeutungslehre”, *Bios* 10 (Leipzig); English trans. by Barry Stone and Herbert Weiner published under the general editorship of Thomas A. Sebeok as “The Theory of Meaning” in the *Semiotica* Special Issue 42.1 (1982), 25–82.
- Uexküll, Jakob von
1909 “Environment (Umwelt) and Inner World of Animals” (1986 English trans. of “Umwelt und Innerwelt der Tiere”), in G. M. Burghardt, Editor, *Foundations of Comparative Ethology* (New York: Van Nostrand Reinhold Company).

- Uexküll, Thure von, Geigges, Werner; Herrmann, Jörg M.
1993 "Endosemiosis", *Semiotica* 96–1/2, 5–51.
- Wimmer, Manfred
1995 "Evolutionary Roots of Emotions", *Evolution and Cognition* 1.1, 8–50 (Vienna: Vienna University Press).
- Winograd, Terence and Flores, Fernando
1987 *Understanding Computers and Cognition* (Norwood, New Jersey: Alex Publishing Corporation).
- Wittgenstein, Ludwig
1958 *Philosophical Investigations* (3rd ed.; New York: MacMillian Publishing Co. Inc.).

Relevant Sebeok publications not directly cited

- Sebeok, Thomas A.
1963 "The Notion of Zoosemiotics", as reprinted in John Deely, Brooke Williams, and Felicia Kruse, eds., *Frontiers in Semiotics* (Bloomington, IN: Indiana University Press, 1986), 74–75.
- Sebeok, Thomas A.
1968 "Goals and Limitations of the Study of Animal Communication", in *Animal Communication. Techniques of Study and Results of Research*, ed. Thomas A. Sebeok (Bloomington, IN: Indiana University Press), 3–14. 1968a. "Zoosemiotics", *American Speech* 43.2, 142–144.
- Sebeok, Thomas A.
1972 *Perspectives in zoosemiotics*, (=Ianua linguarum: Series minor, Band 122; The Hague: Mouton).
- Sebeok, Thomas A.
1981 *The Play of Musement* (Bloomington, IN: Indiana University Press, Advances in semiotics).
- Sebeok, Thomas A.
1986 *I Think I Am A Verb. More Contributions to the Doctrine of Signs* (New York: Plenum Press).
- Sebeok, Thomas A.
1990 "The Sign Science and the Life Science", in "Symbolicity", ed. Jeff Bernard, John Deely, Vilmos Voigt, and Gloria Withalm (bound with *Semiotics 1990* (Lanham, MD: University Press of America, 1993), 243–252.
- Sebeok, Thomas A.
1981 *A Sign Is Just a Sign*, (Bloomington, IN: Indiana University Press ISBN 0-253-20625-1).
- Sebeok, Thomas A.
1991 *Semiotics in the United States* (Bloomington, IN: Indiana University Press).

- Sebeok, Thomas A.
1992 *Biosemiotics* (Approaches to semiotics, Band 106; Berlin: Mouton ISBN 3-11-012947-7).
- Sebeok, Thomas A.
2000 *Life Signs. Essays in Semiotics I* (Ottawa, Canada: Legas).
- Sebeok, Thomas A.
2001 *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
1995 *Advances in visual semiotics* (=Approaches to semiotics 118; Berlin, New York 1995).
- Sebeok, T. A. and Jean Umiker-Sebeok
1980 *Speaking of Apes: A Critical Anthology of Two-Way Communication with Man* (New York: Plenum).
- Sebeok, Thomas A., and Robert Rosenthal, Editors
1981 *The Clever Hans Phenomenon: Communication with Horses, Whales, Apes, and People* (New York: The New York Academy of Sciences).

Chapter 5

Sebeok's panopticon

Paul Cogley

*“You can accomplish anything you want in life provided
you don't mind who gets the credit.”*

The quote is from Harry S. Truman, but it might equally have issued from Thomas A. Sebeok. As a true polymath and an astonishingly effective convener of interdisciplinary research, Sebeok was a rare figure in the modern academy. As a result of his accomplishments, credit might have come to him on a regular basis; but he did not seek it in the selfish fashion of so many individual academics. For Sebeok, even as a Stakhanovite of intellectual endeavour, it was nevertheless clear that his intellectual project needed to be pursued by many collaborators, each with their own personal interests, predilections and determinants, but functioning in a web or network.

Sebeok not only promulgated the core academic virtues but he also dedicated his career to putting them into practice. Chief among such virtues was the appreciation and valuation of the intellectual work of others. Repeatedly, he likened himself to an academic 'bee', taking nectar from its richest sources, in contradistinction to academic 'moles' burrowing incessantly in a delimited area. Yet he was much more than this. Much, much more. Think of the way in which communication theorists of all manner of different stamps were brought together periodically in the 1950s – cyberneticians, information theorists, literary scholars, linguists, sociolinguists and anthropologists. In these heady post-behaviourist days, Sebeok – an admirer of Bloomfield, a student of Morris, a close friend of Jakobson, an alumnus of Cambridge, Chicago and Princeton, a biologist *manqué*, a veteran of linguistics and the US government's specialist in Finno-Ugric languages in the immediate post-Second World War period – forged a coalition of leading figures who would not only collaborate on interdisciplinary ventures but who would also carve out their own subdisciplines. Sebeok accomplished the same feat with his devising of zoosemiotics from 1963, culminating in the 1981 New York Academy of Sciences conference on the Clever Hans phenomenon which

attracted zoologists embodying the same brand of scepticism which characterized Sebeok's own outlook, magicians and even Sebeok's bitter opponents, the credulous researchers into animal 'language'.

Sebeok had an understanding of intellectual life that was unparalleled, then or now. The same principles by which he built zoosemiotics and communication theory in the post-Second World War period were also employed in the establishment of semiotics as a whole, culminating in the inauguration of the International Association for Semiotic Studies in 1969, the superlative interdisciplinary journal *Semiotica* and the bringing together of some of the leading intellectual figures of that age – including Emile Benveniste, Roman Jakobson, Umberto Eco, Roland Barthes, Julia Kristeva – in both ventures. Sebeok then performed the same feat for the Semiotic Society of America, bringing together an array of scholars from disparate disciplines and establishing an organization which holds its 36th annual meeting in Pittsburgh in 2011. Likewise, Sebeok 'invented' biosemiotics – not just by recovering von Uexküll's works or remaining a biologist *manqué* in his own work, but by encouraging scholars such as Jesper Hoffmeyer and his colleagues in Copenhagen and Kalevi Kull in Tartu. When certain projects needed support, Sebeok always seemed to be there, lending his name to all sorts of ventures, especially in Eastern Europe.

One reason for this corresponds to why Sebeok himself frequently devotes attention to personal anecdotes in his writings which, he suggests, add social context or, put another way, refer to the community of inquirers who make up the network of global semiotics. This seemingly frivolous activity is connected to Sebeok's employment of Csikszentmihalyi's concepts of *field* and *domain*. A *domain* constitutes a set of symbolic rules and procedures such as those that can be recognized as constituting an area such as semiotics or linguistics. A *field*, on the other hand, comprises various personages – journal or book series editors, professional organizations, compilers of widely-used reference material, conference organizers, leaders of important research centres or 'schools', popular lecturers, and so forth – who decide which ideas may constitute a *domain*. Without recognition of this fundamental, but occasionally forgotten, fact, work *within* specialisms as well as pursuits of an interdisciplinary nature are likely to be impeded. Yet, also, what perhaps constitutes Sebeok's supreme faculty was his ability to recognize that any domain, often characterized by grand, abstract ideas, is rooted in the lives of people, a fact often forgotten in intellectual life but one which Sebeok acutely understood and which informed all his dealings.

As far as the international academy was concerned, it seemed that whatever one did, Sebeok had already been there. He did not feel the need to tout this; nevertheless, one found out that Sebeok was frequently behind the scenes, pulling strings, speaking to the people at the very top. As tributes are written to Sebeok's genius, it is clear that he was a consummate operator in mixing with the great and the good. The roll call of all those with whom he collaborated, with whom he had correspondence and all those whose careers he helped is too long to list here. Yet, this feature of Sebeok's career is well known and contributes to his legendary status. Indeed, whilst stuck in Ulan Bator, he even managed to charm the Soviet ambassador for Mongolia who was, at that time, none other than the universally feared Molotov. The other major contribution to the legend of Sebeok, demonstrating his power to envision the future, whether it worked out perfectly or not, was the fact that he did not just court the elite minds. My enduring image of Sebeok is at numerous conferences where he would be freely available for discussion in the corridors. I first remember seeing him at a buffet outdoors on the Berkeley campus in 1994 (although the truth is that there are very few pictures of Sebeok in general circulation, so I must have seen him also at some time before this); he was with Umberto Eco, sampling the buffet but chatting to nearly everyone that passed. When I got to be friends with him, soon after, it transpired that he already knew who I was despite the fact that I was a very young academic in one of the UK's lowliest universities. I found out, a short time later, that he had a fairly comprehensive knowledge not just of young academics but even the names of PhD students pursuing semiotics and related topics round the globe. Given that, in my own case, Sebeok's support transformed my work from a mere job into a career, with invitations and collaborations proceeding quickly after my making Sebeok's acquaintance, it is worth considering how his tutelage to so many besides myself impacted on quality of life as a whole rather than just work.

Sebeok was able to accomplish great things for the domain and the inhabitants of its field not just through a phenomenal memory and an unfailing eye for detail ("proofreaders' eye", was what he named his supposed malady), but because of his incredible personality which was so seamlessly woven into his existence as an academic bee. He insisted that the job of academics should be to teach, publish and network. This is not original in itself, but the gusto with which he carried out each is breathtaking. Sebeok was teaching students right up to the last and had a network of ex-student contacts which was second to none (and, on more

than one occasion, gave him decisive assistance). His achievements in publishing, meanwhile, are so staggering that they need an entire book-length monograph to offer a fair discussion of them; his work in semiotics since 1969 is arresting enough, but his work in 'mainstream' linguistics also beggars belief: for example, over a hundred volumes published for the Indiana University Uralic and Altaic Series. His legendary networking has been mentioned already; but what characterizes all of the above is Sebeok's facility with people. He frequently said that many academics were not interested in publishing and that he, in contrast, was rather interested in it, a statement which seems odd given the huge number of scholars trying to publish their way to tenure. Yet, what he seems to have meant is that few academics take interest in the imperatives of targeting books and journals at audiences, making them both profitable and credible and, crucially, because it involves, once more, personal relations, occupational and individual pressures on their publisher contacts.

He was interested in publishing as a process involving people. In short, he was interested in people. There are a number of reasons that this is remarkable but one in particular stands out. Sebeok's father was reputedly very ambitious for his son and had been instrumental in his enrollment at Cambridge in 1936 (at the tender age of 16, note). Many such parent-child relationships where the latter is a prodigy lead to the child realising his/her gifts yet remaining social maladjusted. Think, for example, of Norbert Wiener or of Mozart. Yet, Tom was a genius, not a savant and was almost endlessly personable. For me, he always seemed somewhere between George Burns (a steady stream of jokes about how old he was) and Sean Connery in the role of Indiana Jones' father in *Indiana Jones and the Last Crusade* (1989), particularly the scene where Jones, Sr. reveals that the woman Indiana is attracted to talks in her sleep. Furthermore, Sebeok could carry off an uncanny impression of Connery's Edinburgh brogue (as well as a good many other impersonations including, notably, Umberto Eco).

Sebeok's 2000 plenary lecture in Imatra, Finland began with a poem in French by Samuel Beckett which he read with intense enjoyment, passionately declaring the verse to be "very beautiful". Yet, during roughly the same period, he and I had conducted an email correspondence on whether the bank robber in one of the early scenes of *Dirty Harry* (1970) was reaching for a pistol or a rifle. Tom had an acute capacity to enjoy high culture, especially opera; but he never let out of his sights the pleasures of popular culture. Another of his passions was boxing and he

continued to speak with insight about the personalities of, for example, both Max Schmeling and Joe Louis and their second historic bout of 1938 at which he had been present. Indeed, Tom was even able sympathetically to defend the character of Mike Tyson.

However, in addition to his encyclopaedic knowledge of popular culture, Sebeok seemed to have massive resources by which he could connect with people. His amazing grasp of so many languages obviously played a part in this. But there are so many other things, as well. In his obituary for Sebeok published in *Sign Systems Studies*, Jesper Hoffmeyer refers immediately to Tom's unfathomable ability to reply to emails within five minutes of them being sent, no matter what time of the day it was. That was certainly my experience and, following investigation, seems to have been the experience of everyone with whom I have raised the issue (John Deely having – somewhat understatedly – agreed with me some years before Sebeok's death that "Tom is first class" in attending to his emails). Even in the final days before his death in December 2001, Danuta Mirka, the musicologist and Sebeok-alumnus reported to me that Tom was still responding to her in their longtime email exchange of jokes, although, obviously impeded by his illness and the treatment, he kept messages short (e.g. "Heh heh").

'Always connect' might have been Sebeok's motto. And he had more than enough to help him connect. One facet of his character is of special note: his timing. I experienced a fantastic example of this that I have related at greater length in writing for Jean Umiker-Sebeok, and which is reproduced in this volume (see 'Un sacco di cane', pp. 425–6, below). He was a great collector and teller of jokes, and found all manner of humour in the institutions of higher learning. But, more to the point, he evinced exquisite timing, demonstrating that he knew exactly the best time to make a remark or to make an inquiry in such a way as to get the most efficacious result. Clearly, this had served him well on so many occasions but I was particularly led to muse on how his timing might have been employed in securing the many grants for which he applied and the long-range support he received from powerful figures such as Herman B. Wells.

Of course, it should be added that Tom did not advertise his resources. He did not have to. He was sufficiently comfortable with his persona that he did not mind being approached by anyone, he did not mind getting his hands dirty (within reason) and it was not the practice for him, even in his most advanced years, to turn up to give a paper at a conference and then be shuttled away by taxi (the aspirant preserve of many an academic who

covets celebrity, including at least one of those involved at the inauguration of the IASS). At his final conference appearance in Lugano during his 81st year, I remember him attending nearly all the papers and, rather than advertising himself, asking sensible questions on points of information. Although astute in public relations, Tom's promotions were inspired by his intellectual project rather than by ego. Many things out of which a lesser figure could have made capital remained hidden. Indeed, it was purely by chance that Susan Petrilli and I found out together that Tom had befriended an impoverished family of native Americans ("my Indians", he called them in a self-consciously old fashioned way) in the 1950s and had visited and looked out for them in various ways. In the same fashion, I learned, as a result of Tom mentioning Peter Swales, the phenomenal "itinerant Freud historian" whom I had known quite a few years ago, that Tom was involved in an organization to protect the victims of accusations made in the name of 'recovered memory syndrome'. Ever the sceptic – and inspiringly so – this made sense in relation to Tom.

Tom Sebeok was not just a sceptic, though. Nor was he a destroyer of (admittedly erroneous) research agendas such as the credulous investigations into animal 'language'. On the contrary, Sebeok promoted a broad and intellectually inclusive agenda. His own, personal, intellectual contribution sometimes threatens to get swamped, as here, by the myriad other qualities that demand comment when considering his forging of semiotics. And let it not be denied that he is the figure who did this forging – any account of semiotics should now refer to Peirce, Saussure and Sebeok. In fact, I am not too sure that the reference to Saussure is any longer justified, although what a number of post-Saussureans did with one of Saussure's posthumous texts is arguably of historical interest. So, what can now be said of Sebeok's intellectual contribution to semiotics? Well, I would argue that the question is ill-stated, simply because Sebeok's intellectual contribution *is* semiotics, particularly in its contemporary form. It is the bringing about of a semiotic consciousness, not just in terms of introducing the perspective of the sign but also of re-arranging the world in respect of human understanding of *Umwelten* and, principally, the human *Umwelt*. Although an opponent of naïve humanism, Sebeok's project is concerned with offering an account of what it is to be human.

Like twentieth-century figures such as Charles Hockett, on one side, or Mortimer Adler, on the other, Sebeok's work is devoted, in a yet more ambitious way, to defining the qualities of the human being. Key to this

project is the acknowledgment of humans' communicative capacities, verbal and nonverbal: language, the human *Umwelt*, primary modelling. Yet, this is rather a large project and requires a *community* of inquirers, something Sebeok steadfastly committed himself to maintaining. For the community to grow, new research agendas must be constantly identified and set up, and there needs to be researchers to fulfil them. These research agendas are many in number but, to take one example and demonstrate its magnitude and its potential for growth, consider the (mere) footnote to Sebeok's essay on signifying behaviour in the domestic cat in which he poses a series of questions he would like to see addressed. Among these is the query as to whether the one-way ethological implication among the three categories of 'taming/training/domestication' is analogous to the semiotic categories of Charles Sanders Peirce, 'firstness/secondness/thirdness', and whether these map onto Charles Morris's programmatic subdivisions of linguistics, 'syntactics/semantics/pragmatics'? (2001a: 96). The simplicity of this mapping and the ramifications of the task are equally astounding. When Sebeok's intellectual contribution is discussed, then, the temptation to sum it up alongside his institutional/organizational contributions is understandable, because they are clearly of a piece. However, in light of the kind of research agenda promoted in this example, there is indubitably a need for detailed exegesis of Sebeok's writings in the manner offered by contributions in this volume.

It is unlikely that we will see the like of Sebeok again: someone who so thoroughly embodied the academic virtues, an Enlightenment figure totally sceptical about the claims of humanism, a 'post-modern' (in Deely's sense of the word) who deplored the nihilistic relativism of Parisian post-modernism. Sebeok had an acute sense of the past and, because of this, he saw the future clearly and planned for it. As a visionary, he had vision – in a manner that can only be derived from an embrace not just of the academic life but of all that there is to 'see'. This is what the following essay is about.

The title of this article might seem alarming to those familiar with Bentham's idea of a 'Panopticon' and Foucault's subsequent analysis and emblematisation of Bentham's nascent plan for a disciplinary regime. However, the title is intended to evoke not just the post-Foucaultian meditation on power, discourse and surveillance, but two further areas worthy of investigation in an epoch of 'visual culture'. First the role of vision in the failure to apprehend (aspects of) semiosis; and the 'vision' of the late Thomas A. Sebeok, both in the sense of the 'visionary' nature of

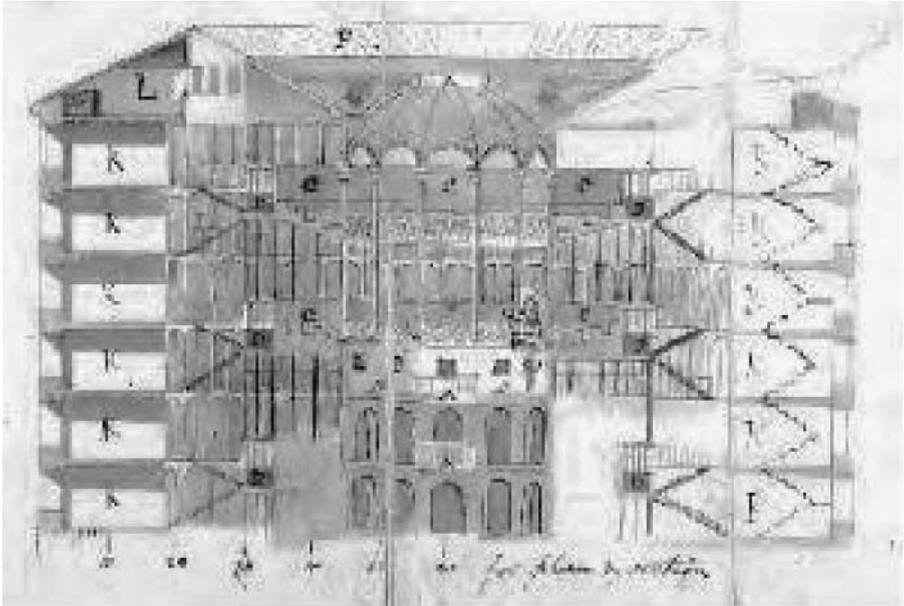


Figure 5.1. Bentham's panopticon

his programme for semiotics and his implication of vision in attempts at understanding the full panoply of communication.

At his death in 2001, and with the publication of *Global Semiotics* in the same year, Sebeok left a number of research projects to be informally pursued by his successors. Many of these represent huge endeavours, yet nevertheless have boundaries within the general semiotic enterprise. One project which is not so explicit in Sebeok's heritage – and even barely implicit, for a number of reasons – concerns a theory of vision. Although he was well aware of the "anti-ocularcentrism" (Jay 1993) of much twentieth-century 'continental' thought, Sebeok did not directly address the matter. However, in what follows, it will be argued that the kind of awareness of the breadth of sign processes that Sebeok sought to exercise himself and to encourage and effect through international semiotics and its convenors, is underpinned by a utilisation of vision that has been hitherto underplayed. Furthermore, Sebeok's implicit take on the place of vision in signification constitutes an important corrective to some of the more negative assumptions of anti-ocularcentrism.

Panopticism – necessarily bad?

Before outlining the project of vision in Sebeok's research, it is necessary to offer some extended comments on the centrality of the idea of a panopticon and the 'denigration of vision' (Jay 1993) which has been so influential in Anglophone receptions of French thought and in subsequent formulations of 'visual culture'. Bentham's idea for a panopticon principally arose out of his fragmentary writings after 1810 (although the idea had gestated since 1785), including letters and some meditations on the philosophical status of fiction. The importance of the latter at first seems obscure in light of the fact that the projected panoptic prison envisaged by Bentham was prompted by concern over the very real phenomena of crime and the legal system. Yet, vision, punishment and fiction were assumed to be intimately linked for good reasons. For Bentham, punishment of individuals would only be permissible if it embodied some utility in serving the greater good. Moreover, that greater good would have to be *seen* to be served. Thus, as Božovič observes, Bentham considers punishment as "first and foremost a spectacle ... insofar as punishment is not intended for the punished individual, but for all the others" (1995: 4). Božovič adds: "This means that *appearance* (apparent punishment, apparent suffering) outweighs *reality* (real punishment, real suffering) whenever the number of innocent exceeds one" (1995: 4). The guilt of the prisoners in the projected panopticon would therefore be 'staged' – appearance, *fiction* – and would serve the utilitarian ends of deterrence from crime and seeing punishment done. Furthermore, not only would the 'spectators' or onlookers be embroiled in a fiction; so, too, would the inmates, since they would believe that they were under constant surveillance. Interestingly, the total surveillance in the prison envisaged by Bentham would not have been based on vision alone. The 'voice' of instruction is also foregrounded through the use of a "tin tube" (an elementary p.a. system) connecting the location of the inspector to that of the prisoner (Bentham 1995: 36–37).

It is worth noting immediately at this point that what Sebeok shares with Bentham is an interest in the lines between fiction and reality. This is by no means a unique interest among philosophers and intellectuals; however, the differences between Bentham and Sebeok may later shed light on the matter of whether vision, when emphasized, necessarily entails ocularcentrism. For Bentham, as Božovič shows, those fictional (non-)entities that are effective – ghosts, the 'hidden god' of the panopticon – have effec-

tivity precisely because they are not real. Bentham, of course, implies an unproblematic assessment of reality when he holds that ghosts would cease to be frightening if they actually existed. Sebeok, on the other hand, evinces an unsurprisingly post-modern position regarding reality. As a semiotician, Sebeok is aware of the perils surrounding referentiality. Interestingly, though, despite his numerous expositions in print of semiotics as the sign science, Sebeok was more inclined to speak (on television and to a lay audience) of semiotics as a means to distinguish between reality and illusion. There are hints of this demotic strain in Sebeok's published comments on the doctrine of signs: "what a semiotic model depicts is not 'reality' as such, but nature as unveiled by man's method of questioning" (1986: 36). Yet, it should be remembered that Sebeok follows Peirce in adhering to principles of realism in philosophy. This is germane, also, to Sebeok's position on vision.

Where anti-ocularcentrism is concerned, clearly Foucault's (1977) use of Bentham's projections as an exemplar of the way that power is inscribed in civil practices enabled the equation of vision with surveillance. This is understandable in light of the fact that Bentham's panopticon was imagined in the service of penal measures. Yet, as Jay points out (1993: 412), Foucault attempted to be circumspect in avoiding the impression that all Enlightenment technologies of power derived from the kind of vaunted panopticism of Bentham (or the dream of 'transparency' of Rousseau). Indeed, Foucault's theory of surveillance is not only reasonable, but has been very persuasive because of its recognition of vision as a flexible control mechanism, cheap and easy to maintain, alive to the checks and balances of tyranny and revolt (Foucault 1980). However, as Jay adds, this did not stop Foucault from proceeding to put surveillance at the centre of controls within his next area of study, sexuality, following the long chapter on panopticism in *Discipline and Punish*.

Jay also argues that "Anti-ocularcentrism in several cases turned, in fact, into hostility to sight in virtually any of its forms" (1993: 588). This not only occurred within French philosophy and social thought, but also in all manner of other realms of Anglophone theorising: film studies, feminism, photography, discourse analysis, and contemporary accounts of 'visual culture'. Foucault's work – as well as that of Lacan and Derrida – has been pre-eminently cited in these fields. Yet, some recognized a basic contradiction in Foucault's *oeuvre* which particularly impacted on his investigation of vision. As Terry Eagleton puts it, with characteristic penetration (Eagleton 2003: 247),

There is a sense in which Michel Foucault hedged his bets here. On the one hand, the more positivist Foucault soberly dismissed all talk of absence, repression, silence and negation in the name of taking supremely seriously what actually existed, in the shape of given regimes of objects and discourses. But the more Dionysian Foucault could always be felt lurking around the edges of these sombre investigations, bursting out here and there in some extravagant praise of Bataille or sudden purple poetic flight, giving free rein for a moment to a clenched refusal of all regime and positivity in the name of something which trembled on the brink of articulation but could not yet speak its name.

Perhaps such ambivalence is closer to the heart of Foucault's project than even Eagleton allows. To begin with, the givenness of "objects and discourses" is not settled. Foucault's notion of discourse witnesses the naming or 'creation' of 'problems' (for example, sexual practices or regimes of punishment). One could argue that Foucault's work on vision does the same: it *creates* the problem as a discourse. To take just one example, Ronald R. Thomas' *Detective Fiction and the Rise of Forensic Science* (1999), in considering the relation of the two entities in its title, tends to emphasise vision in favour of other forensic technologies. It shows how technologies such as the lie detector, fingerprinting, etc. transform the body into a text, although it should also be mentioned that there is some comment in the book on technologies of the voice. There can be no doubt that its Foucaultian approach produces a treasury of insights into fiction of the period and into aspects of criminal anthropology. Yet whether it really constitutes an accurate assessment of how the genre of detective fiction developed is another matter completely. The texts selected for analysis are – certainly from today's viewpoint – canonical. There is no attempt to analyse texts which were overwhelmingly popular in their day. Indeed, it would not be difficult to argue that, besides the detection content, the only thing that really links the texts Thomas analyses is the Foucaultian paraphernalia – technology, surveillance, the body, identity, power. If photography, surveillance and identity were demonstrably important in the period, then surely popular, lowly and 'minor' works would illustrate the point. In short, slavish Foucaultian analysis can often conservatively adhere to a canon or even create its own.

The other point arising from Foucault's ambivalence also concerns some readings of Foucault on vision and some criticisms. In a major essay on Derrida's and Foucault's anti-ocularcentrism, Levin (1997: 439) suggests, in consonance with Eagleton's identification of a Dionysian strain, that Foucault effectively calls for an "anarchic gaze" against hegemonic

positions (a gaze which, one might add, would somehow be outside of regimes of discourse). Indeed, there is evidence in Foucault's work that he readily countenanced the possibility of "reverse discourse" in which, for example, homosexuality "began to speak in its own behalf, to demand that its legitimacy or 'naturalness' be acknowledged, often in the same vocabulary, using the same categories, by which it was medically disqualified" (Foucault 1978: 101). Such a reverse discourse fits more easily with Foucault's well-known endeavours to help give voice to contemporary prisoners, such as his formation of the Prison Information Group. Thus, *pace* Jay, Levin argues that "Foucault was on the verge of recognizing a reciprocity of gazes" (1997: 449). He also suggests that Foucault's encouragement of acts of watching, counter-examination and counter-scrutiny were meaningful attempts to effect a reversal of the governmental panopticon (1997: 452).

Where Jay and Levin do concur, unsurprisingly, is on the *critique* of vision in Foucault's writings and, by extension, in French thought, particularly that associated with poststructuralism. Jay concludes that "the role of vision remained essentially negative" (1986: 194) in Foucault's writings, even in his appraisals of Binswanger, Magritte and Roussel. For Levin, Foucault – and Derrida – cannot escape the impulse to cast vision either in a Nietzschean mould or in the role of Big Brother (1997: 447):

[T]heir understanding of vision tends to be limited to seeing it in critical roles, blind to the roles of the gaze in mutual recognition and reciprocity. One has reason to fear repressive unities, the totalist collective, the 'we' of fascism; but in the politics of Foucault and Derrida, I see this fear condensed into a tragic blind spot.

Undoubtedly, the target of the critique of vision is the Enlightenment project in which, as Levin shows, illumination was believed to liberate the subject but, according to poststructuralism, gave birth to an *episteme* that involves the subject "not only in social relations organized for increasing subjection but also in the normalization of self-regulatory processes – the forever vigilant inner eye of 'conscience'". (1997: 442). Whether Enlightenment thinkers were unaware of this remains another issue (see Haefner 2004), although it may not be insignificant that Bentham's panopticon remained only a blueprint.

In light of the poststructuralist critique of the Enlightenment (a word, of course, absolutely instilled with belief in clear vision), it might also be worth noting that these two points about the ambivalence of Foucaultian

analysis, particularly of vision, are also illustrative of poststructuralism in general. Clearly, the canonising tendency in studies of vision has been self-perpetuating and self-sustaining for poststructuralism. It has given poststructuralism an object of study and, at the same time, maintained a critical posture towards the Enlightenment project while leaving the key texts of the Enlightenment at the centre. The second point concerns the tension that was omnipresent in poststructuralism, a tension between critique of systems and the anarcho-libertarian potential believed to exist in social and political fragmentation. Levin's comments on 'reciprocity' and the partial subscription to it of Foucault and others in the anti-ocularcentric tradition (an example might be de Certeau), not only remind one of the ultimately unworkable conclusions of poststructuralist critique, they also reveal a misplaced faith in the efficacy of agentive democracy. Sebeok's 'post-modern' thinking, with its own project on vision, completely avoids the poststructuralist detour. This is not because it is somehow uncritical of epistemologies based on vision as an innocent vehicle. Rather, Sebeok's position is 'post-modern', in the sense of harbouring a semiotic sensibility *after* the modern: as will be seen, such a position requires a commitment to understanding semiosis as constituted by *all* types of signs, not just those in the visual channel (see Deely 1994; 2001). This sketch of anti-ocularcentrism, then, has sought to provide some preliminary indications of the problems inherent in both condemning vision and in attempting to find alternatives to the authoritarian gaze.

Dialogue and the demands of vision

So, put bluntly, both Levin and Foucault seem to be calling for a liberation of the gaze, at once 'anarchic' and 'democratic'. Anti-ocularcentrism, in thus overstating its case, is backed into a corner where it can only cry out for reciprocity and dialogue. For those familiar with the work of Susan Petrilli and Augusto Ponzio, both heavily influenced by Sebeok, it is clear why such a call for dialogue should be a problem. Drawing on Levinas and Bakhtin, as well as Sebeok's concept of the 'semiotic self' (see below), Petrilli and Ponzio eschew the liberal-democratic version of dialogue in which there are attempts to produce simple reciprocity. For them, "dialogue is not the result of an initiative we decide to take, but rather it is imposed, something to which one is subjected. Dialogue is not the result of opening towards the other, but of the impossibility of closing" (1998: 28). They recognize in dialogue a compulsion and demand rather

than a self-identified impulse to engage with the other. For Ponzio and Petrilli, this is the key issue; yet, their work is focused on the way that there is a need to contend with this problem in contemporary social formations. Put another way, they argue that Western reason – and especially capitalism – is dedicated to the cumulative impeding of dialogue, even when it encourages such figures as ‘identity’, a crucial term in modernity’s non-dialogic conception of dialogue (Ponzio 2006).

The pivotal point at which Ponzio and Petrilli see dialogue being stymied is in the sphere of communication. Although they proceed from the tyrannies of global communication and its inculcation in “communication-production”, they draw from Sebeok the importance of communication, on a dialogic basis, as the “bond that links body, mind and culture” (2005: 230). As such, Sebeok’s semiotics is indispensable in its “attention to the signs of interconnection between the body and species” (2005: 230). This is paramount to understanding vision. Whereas Foucault, Derrida and others in the poststructuralist tradition operate from a glotto-centrist perspective, Sebeok’s work is concerned with *all* semiotic phenomena. As a result, the kind of hand-wringing about the absolute primacy of, for example, ‘language’, one finds in (especially Lacanian) poststructuralism (see Cobley 2008), is avoided; instead, and necessarily, Sebeok’s project involves investigation of the principles of *all* communication, only a very small per centage of which is verbal. Thus, in his essay ‘Nonverbal communication’ (2001b), he draws attention to communication among cells, among higher organisms and ‘endosemiosis’ *within* organisms. Sebeok embraces communication between plants, animals and human animals; he draws attention to the many sources of communication; and he outlines the various channels of communication (1991a). This may seem beside the present point; however, it often needs reiterating that a great many forms of nonverbal communication require vision to be apprehended by humans and other sighted animals. This includes nonverbal communication among plants, animals and, especially, human animals. In the general repression of dialogue that Ponzio and Petrilli identify, a considerable portion derives from the denial of communication beyond the verbal.

Interestingly, the glottocentric bias in denying nonverbal communication also tends to render vision as a ‘failed god’, implicitly unable to deliver the putative precision of verbal expression. Of course, in general there can little argument with Jay’s conclusion that the anti-ocularcentric tradition “has shown the costs of assuming the eye, however it is understood, is a privileged medium of knowledge or an innocent instrument in human interaction” (1993: 590). However, there is an assumption, here, of

the omnipotence of the eye in perception, even when it sees things in a skewed fashion. In respect of the repression of nonverbal communication, one is led to ask about the 'faults' of the eye when they fail to see things. Jay notes that "thinkers from the time of Augustine have recognized a fundamental relationship between ocular experience and desire" (1986: 177). Again, the assumption he uncovers is based on vision's command. Sebeok manifestly operates from the opposite premise and, in fact, his work repeatedly turns to the insufficiency of vision, as opposed to its plenitude, particularly when it is outweighed by desire. In a number of essays and an edited collection, Sebeok revisits the 'Clever Hans effect', a phenomenon derived from the celebrated case of an 'intelligent', 'talking' animal. As is well known, it was reported in Berlin in 1904 that a retired schoolteacher possessed a horse – Hans – whose abilities 'proved' that animals could think and speak. By means of a correspondence between letters written on a blackboard and numbers, represented by the tapping of the horse's front hoof, it was believed that the horse could express its thoughts by creating words. When experimentally investigated by Oskar Pfungst, whose findings were presented in 1907, it was found that Clever Hans' feats of thinking and communicating in language were not evidence of intelligence at all. In fact, it seems that the horse was responding to a number of nonverbal cues emitted by his 'interlocutor'. These were perceived by the horse but unseen by spectators and, as a result, prior to Pfungst's investigation, a great number of witnesses to the horse's performances had been taken in. In their introduction to the landmark international conference on the case, Sebeok and Rosenthal suggest that the events surrounding Clever Hans have a number of ramifications. For some, they provide a lesson in the subtlety of processes of communication, witting and unwitting, between organisms of the same or different species; for others, the lesson of the case concerns how easy it is for humans to be taken in by the deceit we visit upon ourselves; for still others Clever Hans suggests that people and other organisms might be susceptible to self-fulfilling prophecies; for yet others, the case illustrates the pitfalls of obtaining data which too readily fills our expectations or desires (Sebeok and Rosenthal 1981). What is not at issue is that the credulous observers allowed their eyes to deceive them, sometimes as a result of desire.

Arguably, the main point to be derived from the Clever Hans affair for the study of vision is not so much to do with the illusory omnipotence of the eye but to do with its everyday sloppiness. The nonverbal cues from human to animal went unobserved by spectating humans who did not know what to look for or 'chose' to ignore what was really taking place in

the animal's feats of 'intelligence'. In a sense, the case demonstrates a real democratization of the gaze in that numerous onlookers, including those in *authority* (e.g. experts), failed to apprehend what was going on. The eye was clearly at fault, in tandem with desire. But the Clever Hans case is not a straightforward exemplar of surveillance and control. Rather, it is an emblem of the quotidian fallibility of human vision, a fallibility which is not necessarily ameliorated by technological extensions of vision, simply because the interpretation of nonverbal communication is so routinely repressed or wittingly 'ignored'. Nonverbal communication calls for a response; it is an integral feature of the dialogic communication of the other. In this respect, one could say that poststructuralist thought, with its critical exposure of the tyranny of vision and its implicit call for an anarcho-libertarian alternative, tends to a pessimism in which, paradoxically, the cup of vision runneth over and 'dialogue' (in the liberal sense of negotiation) is needed to reduce the disastrous spillage. Sebeok's project, on the other hand, is characteristic of an optimist who bemoans the fact that the cup is not yet *full enough* and that vision constantly misses, misapprehends or represses its own potential in the dialogical imperative.

Some might argue that the relation of vision and the nonverbal realm is overplayed given humans' development of new technologies of communication. Jay (1993: 593) cites Serres' (1989) contention that digitality will cancel out the need for the gaze and that codes and computers will kill off panoptic theory (Pan kills Panoptes). Jay, of course, disagrees. What follows is predicated, likewise, on a disagreement with Serres' prediction, but for the much different reason to do with the human undervaluing of nonverbal communication in human and other life and the concomitant failure to fully apprehend the nonverbal realm.

The impediments of vision

For the seemingly most pertinent of Sebeok's analyses of vision, one needs to proceed from 'Captain Nemo's porthole' (1981), his essay on windows in the work of Verne and Conan Doyle's Sherlock Holmes canon. In light of Sebeok's putative 'biological' approach to communication and signification, it is easily overlooked that he was an adept textual analyst; in this essay he provides a coruscating appraisal of the margins of vision and literary discourse. Sebeok observes the influence of Verne on Doyle and suggests that the Holmes stories replay Verne's interest in scientific expedi-

tions but involve “the appropriation of the world and the heaping up of its pieces in a confined space” (1981: 55). As a result (1981: 55–56),

The dialectic movement, which impels man's encapsulated habitat constantly to beget departures into the infinite, requires channels, portals, or other loopholes through which such passage (of sound, of sight, of objects) is possible from the inside to the outside or from the outside to the inside, between order and chaos – in short, in terms of the classical antithesis between Nature and Culture.

Through a very close reading of Conan Doyle's Holmes stories, Sebeok successively dispels the more extravagant interpretations of the role of windows in art and literature as inapplicable to the Holmes stories: “there is no sense in which windows function within them as either a ‘medium through which the image’ is ‘transformed’, as Zola would have it, or, in a symbolist fashion, as something that must be interpreted” (1981: 58). Instead, Sebeok suggests that windows in the Holmes stories act more like a “hinge” between the narrative and the detail within a story. Because of this detail, Sebeok finds that windows have many different functions in relation to plot, at Baker Street, at the villain's home/workplace and when Holmes and Watson are in transit. Yet, in the systematising aspect in relation to windows, Sebeok finds crucial differences and similarities in *Vingt milles lieues sous les mers* and the Holmes canon. Windows are similar in these works insofar as they represent comfort and security; however, in the world of Holmes, the window, as opposed to Captain Nemo's porthole, represents greater activity since it operates as a portal to the criminal world rather than shutting it out. What is most striking, though, is that, through all the manifold functions of windows Sebeok identifies, there is the theme of the essay's epigram from Kotarbinski's investigation of the scientific approach to knowledge. That is, the call for a description of the view beyond the window to make the description of the window valid.

It would be a mistake to imagine that such an understanding of the framing of vision is naïve. Indeed, it is of a piece with the realist orientation of semiotics in the tradition of Peirce and von Uexküll. As such, it is possible to understand the nature of vision by proceeding from an understanding of what is seen. Sebeok writes (1986: 36),

In the age-old philosophical quest for reality, two alternative points of departure have been suggested: that the structure of being is reflected in semiotic structures, which thus constitutes models, or maps, of reality; or that the reverse is the case, viz., that semiotic structures are independent

variables so that reality becomes the dependent variable. Although both views are beset by many difficulties, a version of the second view, proposed by the remarkably seminal German biologist, Jakob von Uexküll, under the watchword *Umwelt-Forschung* – approximately translated as ‘research in subjective universes’ – has proved to be in best conformity with modern semiotics (as well as ethology). The same attitude was expressed by Niels Bohr when he answered an objection that reality is more fundamental than the language which it underlies. Bohr replied: ‘We are suspended in such a way that we cannot say what is up and what is down’. Signs have acquired their effectiveness through evolutionary adaptation to the vagaries of the sign-wielder’s *Umwelt*.

In the case of vision, then, Sebeok’s work seems to imply that there is little point in bemoaning its partiality *in toto*; rather, a proper investigation of the role of vision in knowledge (especially where humans are concerned) demands attention to the foci of sight and the nature of its adaptations in the past and the future.

One of the areas where Sebeok has pursued questions of the status of knowledge, using it as an exemplar and, implicitly invoking vision, is in fictions about crime and detection. In two volumes – one on Peirce and Holmes co-written with Umiker-Sebeok, *You Know My Method* (1980), and one a volume co-edited with Eco, *The Sign of Three* (1983) – Sebeok completely re-draws the common understanding of what is involved in knowledge through detection and, by association, vision. As Sebeok demonstrates conclusively, ‘classical’ detection in thrillers, as carried out by two detectives who expound upon their methods, Dupin and Holmes, consists of ‘abduction’ or, put another way, ‘retroduction’, ‘hypothesis’ and ‘conjecture’. The inferences of the classic detective are not, as commonly assumed, acts of ‘deduction’; rather they are informed ‘guesses’ of the kind that Charles Sanders Peirce discussed in his writings on science, logic and philosophical method. Since much detective work revolves around what can be seen and observed, as well as assumptions about *hidden* connections, this clarification is important. As Peirce frequently points out, deduction deals with what *must be*, induction is a matter of what *is*, and abduction is about what *may be* (given the necessary conditions). A fictional detective is usually presented with an event – a case – without knowing what precipitated it; the detective’s task, then, is to find the solution, the unseen precipitating factor(s). As Peirce argues, induction is a conclusion that facts similar to *observed* facts are true in cases not examined; abduction or hypothesis, on the other hand, involve a conclusion of “the existence of a fact quite different from

anything *observed*, from which, according to known laws, something *observed* would not necessarily result” (1998: 143 emphasis added). Induction reasons from particulars to the general law in an act of classification; abduction reasons from effect to cause in an attempt to *explain*.

Abduction is altogether more tentative and risky than either induction or deduction. Peirce notes that “There is some justice in the contempt which clings to the word hypothesis” (1998: 146). Yet, problems with abductions arise primarily when they are not tested or when conditions are imperfect. Hypothesis, according to Peirce, must be put as a question; the results of its predictions should be anticipated; random cases of the hypothesis should be used in testing; and a log of failures in testing should be kept (1998: 142) – measures that fictional detectives usually fail to take. In *The Sign of Three*, Truzzi is especially sceptical (1983: 70):

The great weakness in Holmes’s applications of inference – at least as Watson related them to us – was Holmes’s failure to test the hypotheses which he obtained through abduction. In most instances, Holmes simply treated the abducted inference as though it were logically valid. (Most of the parodies on Holmes are built upon this weakness in the narratives). The simple fact is that the vast majority of Holmes’s inferences just do not stand up to logical examination. He concludes correctly simply because the author of the stories allows it so.

In terms of the work of the detective, it might not be altogether infelicitous, then, to consider his/her abductions as failures or successes of vision. Yet, the success of the detective, certainly in fiction, *must* proceed from abductions.

There are at least two good reasons why abduction plays a pivotal role in detection (more so in science), and both are imbricated with vision. Firstly, detection is called for when definite causes are absent. Indeed, one can argue that the entire genre of detective fiction arose in a structural and causal relation with the establishment of a liberal-bourgeois hegemony in the nineteenth century and a pillar of both was the fear of unseen acts of criminality, particularly theft. The laissez-faire spirit and the growth in property holding that went with it also promoted a fear of conspiracy, a concern with the pathological irruption into normality, which crime embodied (see Palmer 1978). Yet, the preoccupation with theft also entailed that conspiracy fears were themselves centred on objects or events disturbingly unavailable to vision, in much the same way as pathogens are. The function of detectives thus occurs not so much in

relation to vision itself, but in relation to what cannot be seen. This is why abduction is commonly taken to be risky.

However, secondly, abduction is efficacious to some significant extent because it does actually trade in objects and events that are available to sight; objects and events which stand as signs of the invisible, but are not necessarily in the purview of a culture that overvalues verbal expression in acts of understanding. Sebeok and Umiker-Sebeok discuss a hitherto little-known autobiographical essay of Peirce on abduction which demonstrates this. In ‘Guessing’ (1929), Peirce relates an incident, and its subsequent investigation, in which his watch, chain and coat were stolen during a trip from Boston to New York on the Fall River Line steamship *Bristol*. When he discovered the crime, Peirce arranged for all the waiters on the ship to be lined in a row for, tellingly, his inspection. During the inspection he was visited with a sudden conviction that one of the men in particular was the culprit and, despite the subsequent assignment of a Pinkerton detective to the case and the pursuit of other suspects, Peirce was proved right in his suspicions. As Sebeok and Umiker-Sebeok show, Peirce’s abduction was a pure guess, a response to a hunch. It seemed to come from nowhere and was probably derived from the unconscious rather than the conscious mind. Yet, quoting Peirce, they note that the chief elements of such abduction are not only “its groundlessness [and] its ubiquity” but also its “trustworthiness” (1980: 23). The reason for Peirce’s insistence on the latter, implicit in Sebeok and Umiker-Sebeok’s account, is that abductive inference is often connected by vision to another form of knowledge.

Resurrecting the scholastic definition later utilised by Peirce, *You Know My Method* argues that there are broadly two modes of knowledge in use in detection: *logica utens* and *logica docens*. The distinction between the two logics points to the divisions of the trained and untrained eye. The first logic is broadly associated with the abductive impulse in that it is a logic-in-use on a quotidian basis; it has an awareness of the need for a logical system but is not an informed logic deriving from years of scientific thinking, experience and, crucially, observation. Such an informed logic, on the other hand – common to physicians and other expert witnesses, including fictional detectives – is the second mode: *logica docens* (CP 2.204; MS 692). Sebeok and Umiker-Sebeok note that Watson in the Holmes canon enacts *logica docens* in respect of his medical practice but is inept in transferring this method to the detection of crime; Holmes, on the other hand, practices the *methods* of medicine *in general*, thus ensuring that “an element of art and magic is blended into the logic of scientific

discovery” (Sebeok and Umiker-Sebeok 1980: 66). Such a mixture of artistry and scientific detail recalls the “hinge” of windows in Verne and Conan Doyle’s writings, a location in which the minutiae of a scene is made pleasingly coherent.

When apprehension is successful, as in accurate diagnoses and prognoses of physicians, the eye has an indispensable role to play. Throughout his work, Sebeok makes reference to the signs that medics have been able to detect through symptoms on the patient’s body as well as nonverbal and verbal references to such symptoms from the patient to the doctor. In the case of health care, vision unites everyday logic with professional logic. In the case of fictional detectives, *logica utens* is likewise coupled with *logica docens* through vision: the ‘clues’ that are registered by the detective in any fiction that plays fair are visible to him/her (and the reader) in nonverbal form; the competent detective *sees* with the untrained eye, but *observes* with the trained one. It should be remembered, however, that vision cannot always immediately unite abductive inference and professional logic: in science, for example, Sebeok and Danesi (2000: 7) note that the appearance of the inside of an atom was initially ‘abducted’ by Ernest Rutherford a long time before it could be verified by sight. Nevertheless, in these cases, there are visible nonverbal signs which stand in for the unseen: the virus, the crime, the electrons.

Despite this emphasis on the potential for the ‘success’ and necessity of vision in the current account of Sebeok’s work, even a cursory acquaintance with his writings reveals that Sebeok was acutely concerned with the consequences of the shortcomings in human communication and vision. Briefly put, *logica utens* and *logica docens* can be combined through vision to achieve successful outcomes in various fields. But when individuals step beyond the boundaries of their familiar, everyday fields deception can take place in the manner that has been discussed in relation to Clever Hans. From the same source, Sebeok gives examples of ‘successful’ vision and a case of ‘failed’ seeing. In a particularly germane anecdote about the renowned animal trainer, Heini Hediger – a narrative which, not coincidentally, revolves around an eye – *logica docens* is presented in action (2001c: 16–17):

Always the compleat animal psychologist, Hediger was ever alert to an occasion to demonstrate his all but omniscient awareness of behavioural minutiae. One time, he asked my wife and me to take lunch with him at an elegant restaurant in an upscale Zürich suburb. The only thing that tended to spoil the sedate atmosphere around the well-laid table was a pesky house-fly (*Musca domestica*), which kept bothering us even as we were studying

our menus. The literature I had read on the subject of flies amply attested that these insects ‘are superlatively adapted to detect motion, as anyone can prove to himself by trying to catch a fly’, because their ability to resolve a moving pattern is ‘as essential to normal flight as escape’ (Dethier 1976: 14). I idly raised the question how the complex interplay of light, form, color, and motion perception, and so forth, that had steered the fly to our table as a potential energy source could be deflected. Hediger who of course well understood the intricacies of the neural network in the eyes of flies, answered with an impish smile, ‘Let me show you’. He picked up his table knife and, when the fly next landed, lowered it in the manner of a guillotine precisely between its eyes, bisecting it along its anterior-posterior axis. We could now proceed with our meal.

The sense of ceremony, here, as well as the professional bearing of Hediger on this problem of the eye are not unrelated. Likewise, Holmes’ artistry in revealing his abductions is not coincidental. Such ceremony is taken to its logical limit in the deceptions practised not only by con artists but, especially, by magicians. A life-long devotee of magic, Sebeok would have been fascinated to watch the contemporary magician, Derren Brown, with his tricks avowedly effected by psychology, misdirection and showmanship. As in the Clever Hans case, magic achieves its results through the strength of desire in the field of vision of the spectator and its accommodation by the ceremony. The case of ‘failed’ vision, however, demonstrates that such witting, or self-, deception at work in spectatorship of magic is not the province of the suggestible or weak-minded alone. Sebeok notes that even the “shrewd skepticism” of Hediger fell into dormancy in his credulous and awe-filled personal account of an Indian street performer who put a seed in the ground and instantly caused a tree to spring up. The trick is well-known to magicians as the ‘Hindu Mango Tree Growth’ (Sebeok 2001c: 22 n. 4; Tarbell 1948: 240–244). One wonders whether Hediger was taken in because it was a plant, rather than an animal, trick – that is, a trick taking place, nominally, outside his field. Clearly, this is an instance in which one’s sense of self – as shrewd, as occupationally accomplished, as aware – is thrown into doubt.

Power, knowledge, the subject and vision

In Sebeok’s project, despite an awareness of the ways in which deception can be wrought through impediments to sight, there is no discourse on the tyranny of vision. As has been argued, the emphasis has been on what is

seen (and 'unseen' or detectable only by signs standing in for the invisible), the nonverbal, embodied communication. Around age 8, Sebeok had the misfortune to suffer blindness for a number of months, although he characteristically treated it as a learning experience. It is not known what he thought when he recovered his sight, but it is not difficult to read off from his publications in semiotics that vision, while crucial to humans in perceiving the nonverbal world, is not all-consuming. Vision is central to Foucault's power/knowledge and plays a pivotal role in constituting humans as subjects. Yet, anthropologists are certainly dubious about the leading role attributed by some to vision in the constitution of the genus *Homo sapiens*. Pasternak notes that it certainly does not distinguish humans from their nearest primate cousins; rather, the desire to search and to know in the genus *Homo* is more to do with agile hands, upright gait, the faculty of speech and a greater number of cortical neurons (2004: 69). For Sebeok, the question of vision in relation to subjectivity involves a false equation because subjectivity is not just *visited* on the body, but is in its very being. Furthermore, for Sebeok, visual awareness is only one – or no – part of the semiotic repertoire that constitutes the sense of self: not just for humans, but for the lowliest life forms all the way down to the cell. The constitution of self for Sebeok requires interpretation; but this does not rely on the visual or the verbal faculties alone.

Sebeok's exploration of subjectivity takes place mainly in four published essays beginning with 'The semiotic self' (1979) and 'The semiotic self revisited' (1989) (both reprinted as a brace in his 1991 book, *A Sign is Just a Sign*), "'Tell me where is fancy bred?': The biosemiotic self" (1992), and 'The cognitive self and the virtual self' (1998), reprinted as a second brace in the 2001 volume, *Global Semiotics*. He sees in the workings of the immune system of an organism, even the cell, the distinction between 'self' and 'non-self'. According to Sebeok, the immune system harbours a kind of 'memory' based on biological discrimination, but also operates another kind of memory, anxiety, whose domain is patterns of behaviour. Anxiety is activated when the self is menaced and this can be triggered by signs that might "take a quasi-biological shape, such as the olfactory trace of a leopard predator for a baboon prey, or be of semantic character, such as some verbal assault whereby a stranger presses in upon the territories of the Self" (1991b: 39). As is evident here, Sebeok considers interpretation, an activity which is central to the maintenance of self, inevitably in relation to an other (2001a: 126):

Any self can and must interpret the observed behavior of another organism solely as a response to *its* interpretations of *its* universe, ‘behavior’ meaning the propensity that enables it to link up its Umwelt with those of living systems within its niche.

The act of interpretation, he adds, is an act of “assignment”, that is, the elevation of an interpreted phenomenon to ‘signhood’. It is also self-maintaining or ‘autopoietic’ (2001a: 126). But vision will only be part of the repertoire of interpretation for specific species; furthermore, those endowed with vision will not derive interpretation of the sense of self from vision alone.

In his essays, Sebeok focuses on anxiety, love and the self-apprehension of body size in the maintenance of the self. Key to each, of course, and to interpretation, is the demand of dialogue which comes from outside, from another organism (in a fashion which maps appositely with Petrilli and Ponzio’s analyses of modernity). It is worth replaying Sebeok’s summarized propositions (1991b: 40), here:

- (1) There are at least two apprehensions of the Self:
 - (a) *immunologic*, or biochemical, with semiotic overtones;
 - (b) *semiotic*, or social, with biological anchoring.
- (2) The arena of the immune reaction is contained within the skin; the arena for signal anxiety is normally between the perimeter of the Hediger ‘bubble’ and the skin of the organism, the former containing the latter.
- (3) Invasion of (a) is initially signalled by the immune response, of (b) by anxiety, with the latter serving as an early warning system for the former.
- (4) In evolution, (a) is very old, whereas (b) is relatively recent. There is a corresponding advance from a purely metonymic nexus to one perceived as causal efficacy.
- (5) Communicational errors occur in both processes, and may have devastating effects on the Self.

Sebeok’s identification of two apprehensions of the self is far from reductive. Instead, it provides a facilitative way of thinking subjectivity which does not need to eschew biology when proceeding from a semiotic premiss. Moreover, its envisioning of b) semiotic, with biological anchoring, comprises all semiosis appropriate and available to the self. Despite this seemingly pansemiotic perspective, however, it is still possible to posit

a hypothesis on the place of vision in relation to the self as conceived by Sebeok and in relation to knowledge and the exercise of power:

Selfhood	
<i>immunologic</i> , or biochemical, with semiotic overtones	<i>semiotic</i> , or social, with biological anchoring
<i>logica utens</i>	<i>logica docens</i>
role of the eye is limited	the eye is thoroughly trained

For Sebeok, vision – when it is available to an organism – is thus subject to the richness of both what is seen and how it is seen. Another way to phrase this is to see the operation of vision as specific to a species' *Umwelt*, the 'subjective universe' or model by which it 'sees' the world.

As has been noted, Sebeok is concerned with evolutionary adaptation of signs within *Umwelten*. Hence his take on vision is most focused on the ways in which it can aid survival of the species as a whole as well as members of the species. Deception and lies, although often necessary, sometimes constitute a threat to the species. So, too, does misapprehension of signs. Indeed, in 1980 Sebeok was involved in a U.S. Department of Energy project requiring the eradication of all potential misapprehension in the reading of signage crucial to the biological fate of humankind. He was the communications specialist on a task force attempting to mark a site containing nuclear waste, the task being to devise a method of warning future generations (up to 10,000 years) not to mine or drill at the site. On the matter of imaging or iconic signage he summarised some problems: "Obviously, pictures give some humans some information on some occasions; but the 'how' and the 'when' are complicated questions, and the answers are neither obvious nor should they be taken for granted in circumstances as delicate as our project demands" (1985: 458). He concluded that images should not be avoided, but rather that "they be selected with extreme forethought, and that they should always be incorporated with a framework that judiciously intermingles icons with symbols, supplementing the pair with indexes whenever that, too, is feasible" (1985: 458–459). Concern over lay abilities to easily recognize nonverbal communication thus remained.

Sebeok's panopticon, the 'all-seeing eye', contrasts with the limitations of Nemo's porthole, which keeps the outside at a distance; the former

has closer affinities with Holmes' "hinge". Like Bentham's panopticon, it can sometimes operate most effectively when it *appears* omnipotent, and even like magic. What it 'sees' is what is often repressed in vision: non-verbal communication, especially among humans. It can be the product of the fruitful union, through vision, of *logica utens* and *logica docens* – although vision is not essential to the mix. In short, it is a future semiotics: non-glottocentric, non-ocularcentric, and at a point where the specialist understanding – or, at least, acknowledgment – of nonverbal communication, which Sebeok shared with magicians and animal trainers, passes over in part from *logica docens* to *logica utens*. Curiously, Levin suggests that there is an element of Derrida's project of subverting the metaphysics of presence, which is dedicated to opening up the 'not-seen': prioritizing writing would use "the eyes as witnesses for the prosecution, getting them to betray their own power – and also their 'blind spots', 'the not-seen that [simultaneously] opens and limits visibility'" (1997: 412). Yet, post-structuralism's entrenched glottocentrism has prevented the pursuit of such an end, while its combination with anti-ocularcentrism has only served to reveal its humanist, libertarian residues. Sebeok's vision for semiotics, despite his many years as a linguist, harbours no theoretical bias towards any specific type of semiosis. Nor does it privilege any one species, however much it recognizes the specifically human capacity to produce an infinitely varied array of sentences. Sebeok's vision is 'panoptical' in that it 'sees' more than many and, to the uninitiated, can seem as if it 'sees all'. But, paradoxically, it does not absolutely require vision; rather, it requires a mere acknowledgment of the relation between observer and observed. In sum,

A complicating fact of life is that the bare act of observation entails a residual juncture that disturbs the system being observed. The essential ingredient, or nutriment, of mind may well be information, but to acquire information about anything requires, via a long and complex chain of steps, the transmission of signs from the object of interest to the observer's central nervous system. Its attainment, moreover, takes place in such a manner that this influential action reacts back upon the object being observed so as to perturb its condition. In brief, the brain, or mind, which is itself a system of signs, is linked to the putative world of objects not simply by perceptual selection, but by such a far-off remove from physical in-puts – sensible stimuli – that we can safely assert that the only cognisance any animal can possess, 'through a glass darkly', as it were, is of signs (Sebeok 1986: 40).

References

- Bentham, Jeremy (1748–1832)
1775–1832 *The Panopticon Writings*, ed. M. Božović (London: Verso, 1995).
- Božović, Miran
1995 “Introduction: ‘an utterly dark spot’,” in J. Bentham, *The Panopticon Writings*, ed. M. Božović (London: Verso).
- Cobley, Paul
2008 “Signifiers and subjects” in S. Petrilli and A. Ponzio eds., *Approaches to Communication: Trends in Global Communication Studies* (Madison: Atwood Press).
- Deely, John
1994 *New Beginnings: Early Modern Philosophy and Postmodern Thought* Toronto: University of Toronto Press.
- Deely, John
2001 *Four Ages of Understanding. The First Postmodern Survey of Philosophy from Ancient Times to the Turn of the Twenty-first Century* (Toronto: University of Toronto Press).
- Eagleton, Terry
2003 *Figures of Dissent: Critical Essays on Fish, Spivak, Žižek and Others* (London: Verso).
- Foucault, Michel
1977 *Discipline and Punish: The Birth of the Prison*, trans. A. Sheridan (Harmondsworth: Penguin).
- Foucault, Michel
1978 *The History of Sexuality: An Introduction*, trans. R. Hurley (Harmondsworth: Penguin).
- Foucault, Michel
1980 *Power/Knowledge: Selected Interviews and Other Writings 1972–1977*, ed. C. Gordon, trans. C. Gordon et al (London: Harvester).
- Haefner, Nick
2004 “Enlightenment and post-Enlightenment subjectivity” *Subject Matters*, 1 (1): 9–28.
- Jay, Martin
1986 “In the empire of the gaze: Foucault and the denigration of vision in twentieth-century French thought” in D. C. Hoy ed., *Foucault: A Critical Reader* (Oxford: Blackwell).
- Jay, Martin
1993 *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Berkeley: University of California Press).
- Levin, David
1997 “Keeping Foucault and Derrida in sight: panopticism and the politics of subversion” in Levin ed., *Sites of Vision: The Discursive Construction of Sight in the History of Philosophy* (Cambridge, MA: MIT Press).

- Palmer, Jerry
 1978 *Thrillers: Genesis and Structure of a Popular Genre* (London: Arnold).
- Pasternak, Charles
 2004 *Quest: The Essence of Humanity* (New York: Wiley).
- Peirce, Charles Sanders
 i.1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Fictae Disiecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Peirce, Charles Sanders
 1901 “The proper treatment of hypotheses: a preliminary chapter, toward an examination of Hume’s argument against miracles, in its logic and in its history” (MS 692).
- Peirce, Charles Sanders
 1878 “Deduction, induction and hypothesis” in *Chance, Love and Logic: Philosophical Essays*, ed. M. Cohen (Lincoln and London: Bison Books), 131–156.
- Petrilli, Susan, and Augusto Ponzio
 1998 *Signs of Research on Signs*, special issue of *Semiotische Berichte*, 22 (3/4).
- Petrilli, Susan, and Augusto Ponzio
 2005 *Semiotics Unbounded: Interpretive Routes through the Open Network of Signs* (Toronto: University of Toronto Press).
- Ponzio, Augusto
 2006 “The I questioned: Emmanuel Levinas and the critique of occidental reason” *Subject Matters*, 3 (1): 1–40.
- Sebeok, Thomas Albert
 1981 “Captain Nemo’s porthole” in *The Play of Musement* (Bloomington: Indiana University Press), 53–75.
- Sebeok, Thomas Albert
 1985 “Pandora’s box: how and why to communicate 10,000 years into the future” in M. Blonsky ed., *On Signs*, (Oxford: Blackwell), 448–466.
- Sebeok, Thomas Albert
 1986 “The doctrine of signs” in *Frontiers in Semiotics*, ed. J. Deely, B. Williams, and F. E. Kruse (Bloomington, IN: Indiana University Press), 35–42.

- Sebeok, Thomas Albert
 1991a "Communication", in *A Sign is Just a Sign* (Bloomington: Indiana University Press), pp. 22–35.
- Sebeok, Thomas Albert
 1991b "The semiotic self", in *A Sign is Just a Sign* (Bloomington: Indiana University Press), pp. 36–40.
- Sebeok, Thomas Albert
 2001a *Global Semiotics* (Bloomington: Indiana University Press).
- Sebeok, Thomas Albert
 2001b "Nonverbal communication" in P. Cobley ed., *The Routledge Companion to Semiotics and Linguistics* (London: Routledge), 14–27.
- Sebeok, Thomas Albert
 2001c *The Swiss Pioneer in Nonverbal Communication Studies: Heini Hediger (1908–1992)* (Ottawa: Legas).
- Sebeok, Thomas Albert
 1991a "Communication" in *A Sign is Just a Sign* (Bloomington: Indiana University Press).
- Sebeok, Thomas Albert
 1991b "The semiotic self" in *A Sign is Just a Sign* (Bloomington: Indiana University Press).
- Sebeok, Thomas Albert and Umberto Eco, Editors
 1983 *The Sign of Three: Dupin, Holmes, Peirce* (Bloomington: Indiana University Press).
- Sebeok, Thomas Albert and Umiker-Sebeok, J.
 1980 "You Know My Method": *A Juxtaposition of Charles S. Peirce and Sherlock Holmes* (Bloomington: Gaslight Publications).
- Sebeok, Thomas Albert and Danesi, M.
 2000 *The Forms of Meaning: Modeling Systems Theory and Semiotic Analysis* (Berlin: Mouton de Gruyter).
- Sebeok, Thomas Albert and Robert Rosenthal, Editors
 1981 *The Clever Hans Phenomenon: Communication with Horses, Whales, Apes, and People* (New York: New York Academy of Sciences).
- Serres, Michel
 1989 "Panoptic theory" in T. M. Kavanaugh ed., *The Limits of Theory* (Stanford: Stanford University Press).
- Tarbell, Harlan
 1948 *The Tarbell Course in Magic* Vol. 5 (New York: Tannen).
- Thomas, Ronald R.
 1999 *Detective Fiction and the Rise of Forensic Science* (Cambridge: Cambridge University Press).
- Truzzi, Marcello
 1983 "Sherlock Holmes: applied social psychologist" in T. A. Sebeok and U. Eco eds., *The Sign of Three: Dupin, Holmes, Peirce* (Bloomington: Indiana University Press).

Chapter 6

The semiotic foundations of knowledge: Remembering Thomas A. Sebeok

Marcel Danesi

Introduction

The traditional goal of semiotic theory has been to figure out how signs are constituted and how they encode referents. The theoretical frameworks developed by Ferdinand de Saussure (i.1906–1911) and Charles Sanders Peirce (i.1866–1913) stand, to this day, as the standard frameworks for pursuing this objective. The implicit tenet that motivates all research in semiotics is that knowledge and representation (the use of signs to encode concepts) are inextricably intertwined. The study of how the sapient species *knows* through representation is, arguably, what semiotics is all about. The world of human beings is a *de facto* world of signs, the thoughts they elicit, and their overall organization into a system of communal meaning that we call a culture. If there is one trait that distinguishes the human species from all others it is precisely the interplay of signs, thought, and culture in generating consciousness – the state of mind that provides humans with a means for making sense of who they are and of where they are in the cosmic scheme of things.

The intellectual power of semiotics lies in its ability to be a veritable bridge connecting all areas of knowledge, and especially the two that have traditionally been seen as separate in Western academia since the 18th century – the humanities and the sciences. Perhaps no one knew this better than the late Thomas A. Sebeok, truly a leading figure in the history of semiotics. He often compared semiotics to a spider's web, which entraps its prey in a network of interwoven strands. Semiotics has been gradually luring more human scientists into its intricate loom of insights into human mentality, behavior, and culture. Indeed, today semiotics is being used more and more by scholars from diverse fields as an investigative framework for understanding the *raison d'être* of such phenomena as language, music, narratives, scientific theories, etc. And this is due, in large part, to the efforts of Sebeok.

As a graduate student at the University of Toronto in the late 1960s and early 1970s, I came under the spell of his writings. Sebeok's books

and articles instantly influenced my own thinking and the direction my own career has taken so many years later. I continue to be in awe of my intellectual mentor, who had become a wonderful friend and from whom I learned so much over many years. I truly miss him. So, too, will the entire profession of semiotics. Without him, it will never be the same. Tom's ideas, his advice, and his writings have guided me throughout my own career. They are imprinted in the words I put down on paper. What can I say about Tom Sebeok that hasn't already been said or written? As the seventeenth century French writer and moralist Jean de La Bruyère (1645–1696) wrote in his 1688 treatise *Of Books*: “A heap of epithets is poor praise; the praise lies in the facts, and in the way of telling them”. And the facts, in the case of Thomas A. Sebeok, speak for themselves. As an instructor of university courses in semiotic theory and method, I have been able to show the relevance of semiotics to students from all kinds of disciplinary domains, primarily because of the fact that I have based the content of my courses on Sebeok's “way of telling the facts”, to put it in La Bruyère's terms. This has allowed me to demystify semiotics and thus make it a more widely known and accepted method of scientific inquiry among newcomers to the field.

Sebeok's legacy

Tom would often point out that the list of those who did semiotics without knowing it would fill the pages of an infinitude of books. If I recall correctly, he referred to this state of affairs as the “Monsieur Jourdain syndrome”. Monsieur Jourdain was a character in Molière's play of 1670, *Le Bourgeois Gentilhomme*, who, when told that he spoke good prose, answered by saying that he didn't know he spoke in prose. Analogously, Tom would point out to some scholar in a field such as psychology, anthropology, or medicine, that he or she was, like Monsieur Jourdain, doing something of which he or she was not aware – semiotics. The number of “converts” he made for semiotics in this way is vast.

What has a whole generation of semioticians learned from Thomas A. Sebeok? We have learned that there is an intrinsic connection between the body, the mind, nature, and culture, and that the process that interlinks these dimensions of human existence is semiosis, the innate activity that underlies the production and interpretation of signs. The *raison d'être* of semiotics is to investigate the interconnection between life and semiosis. And that is what Thomas Sebeok did brilliantly. His major books, and I

mention only a handful here – *Contributions to the Doctrine of Signs* (1976), *The Sign and Its Masters* (1979), *The Play of Musement* (1981), *I Think I Am a Verb* (1986), *Signs* (1994), *Global Semiotics* (2001) – have shown how semiosis interacts with biological, psychological, and cultural processes and systems. Incidentally, I had the distinction and pleasure of co-authoring with him *The Forms of Meaning: Modeling Systems Theory and Semiotics* (2000), a project that he and I had agreed to carry out in order to show the world that the Toronto-Bloomington axis was based not only on friendship, but on a true spirit of scientific inquiry.

It is difficult to identify a single theme as characteristic of his overall “theory of semiosis”. Like the great biologist Jakob von Uexküll (8 September 1864–1944 July 25) – whose “discovery” by North American scientists is due in large part to Sebeok’s efforts – Sebeok found a point of contact between a mainstream scientific approach to the study of organisms – *biology* – and that of the strictly *semiotic* tradition. Von Uexküll argued that every organism had different inward and outward “lives”. The key to understanding this duality is in the anatomical structure of the organism itself. Animals with widely divergent anatomies do not live in the same kind of world – known as the *Umwelt*. There exists, therefore, no common world of referents shared by humans and animals equally. This common “internal world” is known as the *Innenwelt*. The work of von Uexküll and Sebeok has shown that an organism does not perceive an object in itself, but according to its own particular kind of *Innenwelt* that allows it to interpret the world of beings, objects, and events in a particular way. For Sebeok, this system was grounded in the organism’s body, which routinely converts the external world of experience into an internal one of representation in terms of the particular features of the neural *modeling system* with which a specific species is endowed.

Sebeok thus transformed semiotics back into a “life science”, having taken it back, in effect, to its roots in medical biology. In other words, he uprooted semiotics from the philosophical, linguistic, and hermeneutic terrain in which it has been cultivated for centuries and replanted it into the larger biological domain from where it sprang originally. Sebeok’s biological approach inhered in a perspective that aimed to investigate how all animals are endowed genetically with the capacity to use basic signals and signs for survival, and how human semiosis is both similar to, and different from, this capacity. He distilled rudimentary elements of semiosis from animate reality, so as to establish a taxonomy of notions, principles, and procedures for understanding the uniqueness of human

semiosis. The result has been a program for studying human cognition as a biological capacity that transforms sensory-based and affectively-motivated responses into a world of mental models. Signs are forged within the mind as extensions of the body's response system. No matter how bizarre or unearthly the shape of creatures which might inhabit alien planets, we are likely to recognize them as animals nonetheless. The chief basis for this recognition is that they are bound to give off "signs of life".

There is no doubt in my mind that Tom Sebeok's ideas will continue to shape the development of semiotics in the future, for the simple reason that they now have become unconscious patterns of thought in those who have themselves been influenced by his work – and there have been myriads of thinkers so influenced. Indeed, in having transformed the mainstream study of semiosis into a life science, Sebeok has expanded the nature of semiotic inquiry and attracted, in the process, more and more interest in it from those working outside the field.

The term *model* is central to the Sebeokian paradigm. It requires some discussion and elaboration. Model-making typifies all aspects of human intellectual and social life. Before building a house, a constructor will make a miniature model of it and/or sketch out its structural features with the technique of blueprinting. An explorer will draft a map of the territory he or she anticipates traversing. A scientist will draw a diagram of atoms and subatomic particles in order to get a "mental look" at their physical behavior. Miniature models, blueprints, maps, diagrams, and the like are so common that one hardly ever takes notice of their importance to human life; and even more rarely does one ever consider their *raison d'être* in the human species. Model-making constitutes a truly astonishing evolutionary attainment, without which it would be virtually impossible for modern humans to carry out their daily life routines. All this suggests the presence of a *modeling instinct* that is to human mental and social life what the physical instincts are to human biological life. Now, what is even more remarkable is that *modeling instincts* are observable in other species, as the relevant literature in biology and ethology has amply documented. The purpose of semiotics, Sebeok argued, is to study the manifestation of modeling behaviors in and across all life forms.

In a fundamental sense, the study of all modeling phenomena is a study of the symptomatology between body, mind, and culture – just as the ancient physicians maintained. Sebeok's framework for studying this nexus is called *Systems Analysis* (SA). The main tasks of SA are to determine: (1) what constitutes a model in animal behavior, (2) to what modeling system it pertains, (3) what kind of modeling activity it mani-

ests, and (4) what its function is. These tasks are guided by several key notions.

First, there is the notion which posits three distinct but interconnected types of models: (1) a *primary* model, which is a simulacrum of a referent; (2) a *secondary* model, which is either an extension of a simulacrum or an indexical form; and (3) a *tertiary* model, which is a symbolically-devised form of some kind.

Second, there is the notion of stability vs. pliability, which claims that a model (natural or artificial) can be *stable* (e.g. a written text) or *pliable* (e.g. oral conversation): stable models are fixed and relatively permanent or invariable; pliable ones are temporary and adaptive to the dynamics of a situation.

Third, there is the notion which posits that the *form* a model assumes can be *singularized*, *composite*, *cohesive*, or *connective*, providing clues as to the nature of the referent or referential domain that it encodes.

Fourth, there is the notion of interconnectedness, whereby the modeling system deployed will vary according to the nature of the referent, the function of the model, and the situation in which the modeling act occurs.

Fifth, SA makes a distinction among semiosis, modeling, and representation: *semiosis* is the neurobiological capacity to produce forms (signs, texts, etc.), *modeling* is the channeling of the *semiotic* capacity towards a *representation* of some referent (the actual act of creating a form).

Sixth, there is the notion that all models possess the same structural features.

Finally, there is the notion that modeling reveals how the brain carries out its work of transforming sensory forms of knowing into internal forms of thinking and external forms of representation: a specific external *model* is thus considered to be a “cognitive trace” to the form a concept assumes in the mind; and since concepts depend on how they are modeled, Sebeok argued that the *form* that *knowledge* takes depends on the *type of modeling* used.

In SA, the species-specific forms of knowing are seen as manifest in the modeling behaviors of the species. Access to how a species knows something, therefore, is through the modeling system it possesses. Primary modeling, for instance, is “knowing through simulation”. Secondary modeling, on the other hand, is “knowing through extension and indication”. This implies that secondary modeling does its handiwork, by and large, after the primary system has completed its own. Further extensions of forms leads eventually to highly abstract, symbolic (tertiary) systems of representation. The primary (iconic) system is the “default” system, while

the other systems are extensional systems. Thus, SA attempts to take systematically into account the various facets of semiosis in an integrative fashion.

Once the nature of the modeling process has been ascertained, then its forms and functions can be inferred from observation of the semiotic behavior they permit. Thus, the cross-species nature of SA has clear implications for ethology and animal psychology, as well as for traditional semiotic theories. Its central proposal is that the tendency in human representation is to produce, first and foremost, a sensory model of some referent or referential domain and then, by extensional processes, to make it encompass increasingly larger domains of meaning. This “flow” from iconicity to cultural symbolicity, i.e., from concrete, sensory modes of representation to complex, abstract modes, characterizes human modeling.

In effect, Sebeok’s work has thus made it obvious that:

1. Knowledge is indistinguishable from the signs used to model it.
2. Modeling unfolds in various ways, from simulation to culture-specific symbolic practices.
3. Models and their referential domains are interconnected to each other in cultural contexts.
4. All models display the same pattern of structural properties.

Parenthetically, these very same points are implicit in John Deely’s (2001) monumental history of semiotic theory and practice. This comes as no surprise, since Deely was Sebeok’s most illustrious pupil.

There is no doubt, to my mind at least, that Sebeok’s legacy provides an exciting agenda for conducting research that is truly interdisciplinary and apt to produce interesting, meaningful, and lasting results. The attractive aspect of Sebeokian semiotics is that it allows us to use a standard terminology for studying semiosis in all its manifestations as an interconnected multi-dimensional phenomenon and, as a corollary, that a semiotic approach will bring out the commonality among different representational systems. Because all such systems are composed of the same kinds of signifying properties, semiotics will provide a basis for showing an interrelation and interdependence among all areas of knowledge, from language to science and the arts. A digit in numerical representation, for instance, has the exact same structural features in representational terms that, say, a noun in language has – i.e. both are signs with specific forms, functions, and meanings. In practical terms, therefore, semiotics makes obvious the fact that both types of signs are structurally isomorphic in the ways in which they designate something, refer to the world, take on

connotations, and so on. The difference between a digit and a noun is thus not to be located in structural patterns, but in the different functions of the representational systems to which they pertain. This is why, despite their different cognitive and social functions, both systems are understandable in exactly the same way. In essence, semiotics makes it clear why such seemingly diverse forms of representation as poetry and mathematics are not mutually exclusive – with adequate exposure to both, people will be able to extract meaning from either one of them in remarkably similar ways.

In the same way that Euclid's *Elements* bestowed systematicity and unity upon the study and practice of mathematics in antiquity through its coherent synthesis of concepts and techniques, so too will semiotics provide the systematicity upon which to build a single discipline aiming to study human nature from an amalgam of currently-used concepts within the individual human sciences. Semiotics opens up a unique possibility for realizing Sebeok's desideratum of a sign-based approach to all knowledge – a desideratum that is fomenting throughout the world of academia.

In a sense, semiotic analysis is comparable to solving a jigsaw puzzle. The goal of the puzzle-solver is to figure out how the pieces of the puzzle fit together to produce the hidden picture that they conceal as disconnected pieces. But solving the jigsaw puzzle tells the solver nothing about why he or she is fascinated by the puzzle in the first place, nor what relevance it may have to life. Analogously, the semiotician seeks to figure out how the bits and pieces (signs, concepts, etc.) cohere into larger patterns to produce the "broader picture". It is this sense of the "broader picture" that semiotics imparts to the study of human nature, as Deely (2003) has also cogently argued. I have no doubt that human scientists will gain enormously by basing their research on a semiotic foundation.

Concluding remarks

To conclude this note on the legacy left by the late Thomas A. Sebeok, I would like briefly to draw attention to Sebeok the individual. As great an intellectual as he was, with a truly international reputation, he nevertheless had profound respect for his colleagues in the field and a considerable attachment to students. It really could not be otherwise. Great thinkers are invariably appreciative and respectful of the others in their field. In his preface "A Global Enterprise" to a reprint of *The Sign & Its Masters*, John Deely – as mentioned, one of Sebeok's own students and now a leader in the field of semiotics – remarks that Sebeok "may fairly

be called the ‘*primus inter pares*’ of that élite handful of contemporary intellectuals responsible for the establishment of semiotics as an interdisciplinary perspective affecting our perception and understanding of the world of ideas in the full panoply of its traditional entrenchments (“the disciplines”) and historical development”.

Now that Sebeok the Professor has left us, it has become even more obvious to me how important he truly was to the field of semiotics. He was perhaps its “greatest mind”. I conclude this *rémembrance* with the apt words of the nineteenth century German philosopher, Arthur Schopenhauer (1788–1860), who wrote in 1851: “Great minds are related to the brief span of time during which they live as great buildings are to a little square in which they stand: you cannot see them in all their magnitude because you are standing too close to them”.

References

- Deely, John
2001 *Four Ages of Understanding: The First Postmodern Survey of Philosophy from Ancient Times to the Turn of the Twenty-First Century*. Toronto: University of Toronto Press, 2001.
- Deely, John
2003 *Why semiotics?* (Ottawa: Legas Press).
- Eco, Umberto
1976 *A Theory of Semiotics* (Bloomington, IN: Indiana University Press).
- Peirce, Charles Sanders
i.1866–1913. *The Collected Papers of Charles Sanders Peirce*, in 8 vols., ed. C. Hartshorne, P. Weiss, and A. W. Burks (Cambridge, MA: Harvard University Press, 1931–1958); all eight vols. in electronic form ed. John Deely with an Introduction “*Membra Fictae Disjecta – A Disordered Array of Severed Parts*” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Saussure, Ferdinand de
i.1906–1911 *Cours de Linguistique Générale*, lectures delivered at the University of Geneva and posthumously published from auditors’ notes by Charles Bally and Albert Sechehaye with the collaboration of Albert Riedlinger (Paris: Payot, 1916).
- Sebeok, Thomas A., and Danesi, Marcel
2000 *The forms of meaning: Modeling systems theory and semiotics* (Berlin: Mouton de Gruyter).

Chapter 7

Thomas A. Sebeok and semiotics of the 21st century

*John Deely*¹

I have many friends within semiotics, including the illustrious Umberto Eco. But even as Eco is the veritable symbol of semiotics in the popular culture, so it is only of Thomas Sebeok that it can be said that he was the single most important intellectual of the 20th century for the development of semiotics in what we have come to understand of it by the 21st century's first decade; and I want in this essay to indicate why he was that important.

I say what I say, then, about his central place in establishing the doctrine of signs as a thematic concern of academic and intellectual culture, not because Sebeok was my friend, but because of what he did in shaping, naming, and establishing the global phenomenon of the intellectual tradition now called 'semiotics' within human culture. A time-line (see p. 125 below) will help to grasp my point here, bearing in mind Aristotle's observation that we understand even the beginnings of something better when we are able to see it in terms of its outcome.

Placing Sebeok in a timeline

Now semiotics has roots as deep as philosophy itself; but as an intellectual movement it is a flower of the 20th century. It is in semiotics so

-
1. On June 9 of 2003, the International Summer Institute for Semiotic and Structural Studies at Imatra, Finland, held a session in "Homage to the Life and Work of Thomas A. Sebeok (9 November 1920–2001 December 21)". My own presentation for this occasion was entitled "Thomas Sebeok and the External World", an hour talk from 09:00–10:00. On April 1 of 2005 I presented a seminar at the New Bulgarian University in Sofia on "Thomas Albert Sebeok and Semiotics", which was subsequently published in a limited local edition under that title (Deely 2005). I have written other essays concerning Sebeok and his work 1978, 1986a, 1989a, 2000, 2005, 2005a), but it is mainly upon these two posthumous essays that I draw in preparing this contribution to the present Sebeok memorial volume.

considered – as an intellectual phenomenon of the 20th century – that Sebeok finds his place as the single most important influence shaping the outcome of that 20th century development. For as the 21st century opened, Sebeok's life came to an end; but the forms of speech, the distinctions, and the information constituting the by-then accustomed materials of the community of inquirers associated with the intellectual development of semiotics, all bore the mark of the shaping influence Sebeok exercised through the scope of his own intellectual involvements, beginning with the term “semiotics” itself as the name finally accepted on all hands for the study of signs.

The categories for understanding how the action of signs (or “semiosis”) weaves together the realms of culture and nature within human experience were originally proposed in 1867, well before the 20th century opened. That seminal contribution, of course, belongs to C. S. Peirce, but it was very slow to catch on, through later works of Morris and Jakobson (teachers both of Sebeok), among others.

The seminal development that proved initially explosive for the 20th century development of interest in signs occurred in the opening two decades of the century, provoked by the work of Ferdinand de Saussure, delivered in lectures between 1906 and 1911 and posthumously edited and published in 1916. After Saussure came a bevy of thinkers in Western Europe and the Americas rallied under the banner of “semiology”, the name Saussure had proposed for study of signs, to be sure, but hardly the general or foundational study its proponents tended to deceive themselves into thinking.

Curiously, in Eastern Europe, there was a development of “Soviet Semiotics” (the “Tartu-Moscow school” in particular), developed principally around the work of Juri Lotman, which, though it thoroughly embraced Saussure's glottocentric *signifiant/signifié* model for the analysis of signs, did not adopt the term “*semiology*” for the enterprise but preferred instead the historically novel term *semiotics* as originally proposed by Locke in concluding his 1690 *Essay Concerning Humane Understanding*. In addition, Lotman gave a role to perception in his notion of language as the “primary modeling system” that Sebeok saw as an opening to the more fundamental role of biology in human semiosis that was missing in the thinking of those who adopted both Saussure's linguistic model of sign and his proposed label or name for this “new science”, and among his great achievements by 20th century's end was the synthesis Sebeok was able to make of the early 20th century work of the German Estonian biologist Jakob von Uexküll with this late 20th century work of the

Russian Estonian cultural theorist Lotman; but this gets us ahead of the story.

Necessary to realize at this point is that it was this band of glottocentric thinkers – Barthes, Lacan, Foucault, Derrida, Lotman, Greimas, a veritable plethora – that dominated the middle decades of the 20th century, East and West. Sebeok emerges on the scene only about 1963, when he at once gathers into his orbit *all* the influences at play, and proceeds to give them the shape and direction that came to define the horizon of semiotic inquiry by the time 21st century opened. So our timeline:²

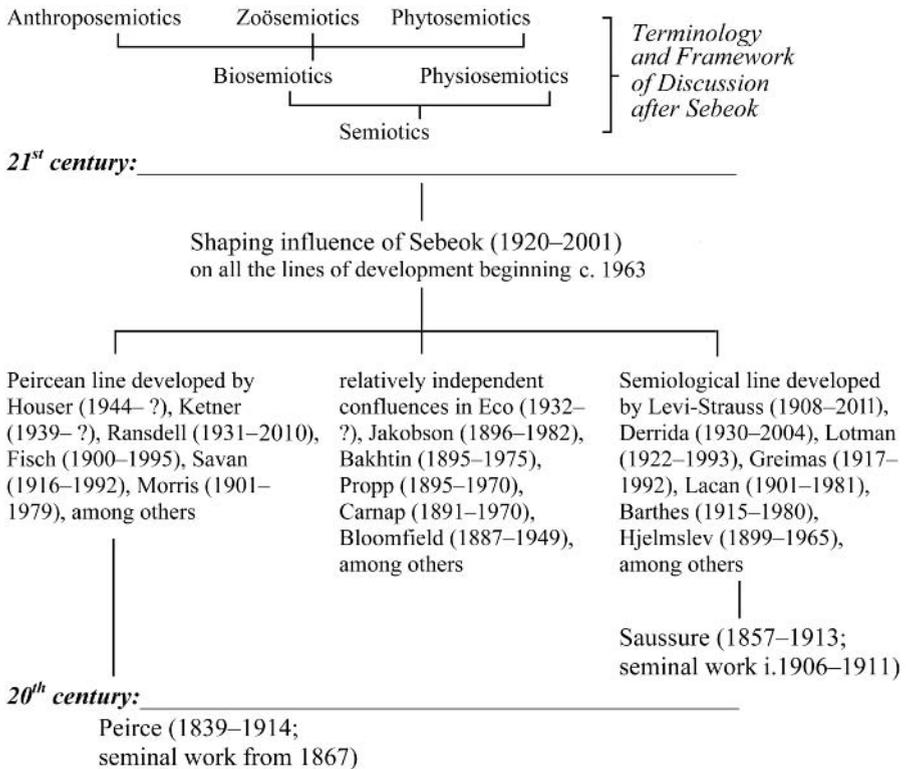


Figure 7.1. Timeline of semiotic development over the 20th century

2. A more complete and detailed discussion of this semiotic timeline is developed in Deely 2009: Appendix E, 239–246.

First meeting

I first met Thomas Sebeok around 1969 as a name in a flyer advertising the Mouton “Approaches to Semiotics” book series for “monographs and translations of classics” in the theory of signs. Then we became correspondents over the possibility of a first independent edition of the foundational semiotic treatise of John Poinsett, *Tractatus de Signis*, composed in the opening decades of the 17th century. Finally, we met in person at an anthropological conference in Chicago in 1971 or so, a conference I went to only informally for the twofold purpose of a morning negotiation with Peter de Ridder of Mouton (that the Poinsett edition would have to be bilingual to make a fully lasting sense³), and an evening dinner with

-
3. This was a decision that had been forced upon me by a three-and-one-half years effort to translate the “simple” terms of Poinsett’s basic distinction between *relatio secundum*, on the one hand, *dici*, and, on the other hand, *esse*. The first two terms presented no great problem: “relation according to”. It was the last two terms, “*dici*” and “*esse*”, that presented the problem. Transliteration would not do, for a principle of the translation was that the rendering of every term and expression had to “make sense” to the translator. There was to be no dodge like “I don’t know what it means, but that’s what it says”, or “this expression cannot be translated”. After trying numerous renditions, I finally hit upon two that finally “made sense” in the overall context of the treatise: *dici* = “the way being must be expressed in discourse”, i.e., the requirement of any and every being within human experience to be related to what is other than itself in order to understand for what it itself is; *esse* = “the way relation has being”, i.e., the singularity of relation as the only mode of finite being which transcends both subjectivity and all divisions of subjectivity, even though relation as suprasubjective depends upon aspects of subjectivity in order to exist, circumstances alone determining whether the existence of the relation is in the order of physical or mind-independent being or in the order of purely objective mind-dependent being. Poinsett’s point was that no one denied the existence of relations in the *dici* sense, and yet only relations in the *esse* sense, denied by many (and, after Ockham, by *all* the moderns, Hegel alone partially excepted) and understood in the fullness of its singularity by almost none, could explain the being and action of signs.

So, two three-word expressions, differing in only one word, in order to be *translated* and not merely *transliterated*, required respectively eleven and eight English words! Without the original in a parallel column to prove the point and to challenge the scholarly and/or (justly) skeptical reader, there was no point in publishing the English translation. It was this decision on my part that led to my first face-to-face meeting with Sebeok as series editor and Peter de Ridder as contractual representative for Mouton publishers.

Professor Sebeok and his wife, Jean Umiker-Sebeok. After that, we met in person many times in many places, and it is not too much to say that we became friends as well as professional associates in the development of semiotics, both in the United States and abroad.

I was not prepared to see him die when he did. For me, it was a kind of proof of something that had through most of my life seemed abstract rather than particularly real, namely, my own mortality (which I would prefer even now not putting to the test). The external world is not only everything that preceded our birth but, even more so, everything that survives our death. So we can say that we, the writer (at least for the nonce), and the readers of these remarks in every case, are all too much part of Thomas Sebeok's external world.

The external world

If you cling to an understanding of the external world in the manner to which modern philosophy has accustomed us, you will not understand very well or have much chance of getting to the bottom of the thought of Thomas A. Sebeok – or for that matter, of semiotics as the doctrine of signs. Some rectification of the terms in which the problem is thought of are essential, as early and as clearly as possible in the dialogue. So let us begin with an attempt at the needed rectification.

We become cognizant of someone's death, but whether that death is welcome or regretted from our point of view, the world, from our point of view, survives. It continues, external to the deceased who, as far as the world is concerned, in some basic sense "is no more".

So what is the world? We try to imagine this world from the point of view of the one who has died, or even imagine ourselves as the one who has died; but we do not know enough successfully to say from such a point of view what happens to the world. We know for sure only that the world continues, as long as we are not the one who dies. And we are pretty sure that, were we the one to die, the world would continue anyway, and that others, whether witnesses to our death or not, or even aware of our death, would find that the world continues, just as we find that it continues when others die.

So what is the world? Something that is, at least in many respects, if not in all, independent of our personal consciousness. And yet this consciousness respecting which so much of the world appears to be independent is essential to there being a world at all from our point of view. We are

conscious of the world as something around us, and as something of which we are a part. We are conscious at once of ourselves and of the world which is more than ourselves. And we experience the death of others as consisting in, more than anything else, a disappearance from our consciousness of the presence of what we experienced through the body as another consciousness, another person, whose body no longer emits signs of human life, human consciousness in particular.

We must distinguish between who we are as persons with a name, that is to say, as linguistic animals (semiotic animals, really; but that is another story, too involved to tell here⁴), in contrast with what we are simply as generically animal biological organisms. For what we are as biological organisms was fixed genetically at the moment of our conception, while what we are as persons depends more on social and cultural relations than on our biological heredity. Our biological heredity makes us human organisms. It determines what kind of cognitive powers we have, what we are aware of in the environment in its physical aspect. Considered in terms of our biological heritage, the objective world – what Sebeok and others in semiotics have come to call the *Umwelt*, the world as known in contrast to the physical environment as it has a being surrounding and making possible all organisms – is as species-specific for human organisms as it is for crocodiles, cockroaches, turtles, armadillos, or any other species of living thing capable of sensation, i.e., any animal.

So here in our own biology and the proportion established by our bodily organs between our environment and our body whereby we are able to become aware in sensation of certain aspects of the physical surroundings but not of other aspects, here we find the first point of stability in our experience of the world. The *physical environment* as a whole is the same for all species. But each species, through physical interaction with its surroundings, becomes aware of those features of the surroundings to which its biological nature proportions it, thus constituting – in sharp contrast to environment as merely physical and basically mind-independent – an *Umwelt*, an “objective” or “known” world. The organism can do nothing else, except, of course, die. Short of death, for as long as it survives as a cognitive organism, it becomes aware of some aspects of its surroundings but not of others in the process of sensation, which for the animal is comparable to the root system of a plant. The matter is of sensation is, so to say, “biologically and physically determined”. The open eye

4. See Deely, Petrilli, and Ponzio 2005; Deely 2010.

of a healthy organism in a lighted situation can close, but it cannot remain open without seeing colors, shapes, and movement if anything in the visual field proportioned to the eye's range happens to be moving.

Here we must deal at the outset with something surprising, something that cries out for an account. Why does the Umwelt appear inevitably as before all else an objective world, and only later, if at all, does the human organism become aware of it as a universe perfused with signs – so perfused, in fact, that, once one has been made aware of the nature and role of signs in the Umwelt one is justified in going so far as to say that in its objectivity the universe consists exclusively of signs?

So there are two things we need to ponder at this point. We need to ponder and not be quick to dismiss the fact that the universe first appears in the experience of organisms as an objective world, not as a universe of signs. And we need to ponder and give some account of how a world of objects is compatible with a universe which consists of signs exclusively.

Objects and the external world

Everything we know about biology promotes the abduction that there is a physical environment common to all organisms on earth, even though every Umwelt is species-specific. The physical environment is not a world of objects; it is a world of things. If it were a world of objects merely, it would be no different from an Umwelt. No Umwelt, as such, is *common* to all organisms, however, for the reasons already outlined. Yet the physical environment we are required by experience to *think of* as common in some measure or sense across the Umwelts. Umwelt is the experienced world; but environment as physical is something at once much more and less, less as something only partially (extremely partially) included within an Umwelt, more as filled with 'meanings'. We do not experience the physical environment as common in this sense of being "the same" for all organisms. All that we experience is an Umwelt – our own, species-specific like any other. Yet within the objects of our experience we also experience them as consisting of more than our experience of them. From this aspect of objective experience the abduction of a common physical environment takes rise, even without our deliberately or fully realizing the process. Every object as such is something known, something we are aware of. But among the objects known, many of them present – within the very experience itself through which they are known – aspects which exist not only in our experience.

What is edible, like what we can sense, depends upon our biological constitution. Among the edible things, normally in order to eat them we must first become aware of their existence here and now. We cannot move to our mouth food we cannot find. But if this food consisted in nothing more than its objective (its known) being, it could not nourish us. Kant considered that a thaler in the pocket differed not a whit from a thaler in the mind. But that was because Kant was a modern philosopher, that is to say, an idealist in the classical modern sense, a thinker unable to conceive how for the mind an awareness and knowledge could be in the least possible of something that the mind did not make, something more than a mental representation.

Despite some false pretenders to the name of semiotician who in fact leave the epistemological situation where Kant found it and pretend to develop from the classical modern idealist paradigm a doctrine (or “science”, as they prefer to pretend) of signs, semiotics in principle does not have this problem. As Sebeok put it (1991: 2), semiotics in its noetic dimension regards what the moderns call “epistemology” as no more than a “midmost target” and far (very far indeed) from anything like the “whole story”. That is why semiotics is not merely “postmodern” as a style of fashion (such as the French thinkers commonly but superficially – not to say mistakenly and nominalistically – *called* “postmodern”); semiotics is postmodern *in principle*. Semiotics *begins* by replacing the epistemological paradigm of idealism with its own paradigm, that of the sign understood and taken according to its own proper being – relation in its singularity as indifferent to all subjective divisions of being, including the division between what is mind-independent and what is purely objective. Such a being as constitutes the sign is neither that of an object nor that of an idea, still less that of a thing, but quite simply that of a suprasubjective function whereby what the sign is not is presented by the sign to an interpretant as the sign’s significate or “objective content”.

Semiotics begins only when the sign becomes known in its proper being, and that occurs only when the action of signs, semiosis, becomes *itself* something of which we have become aware – a “metasemiosis”, if you will.⁵ If a fact need be known in order to be a fact, then semiosis is not a fact but simply a process whereby things are constantly thrown outside of themselves in interactions with what they themselves are not. If

5. On the subtlety of this delicate point, see the “Rationale of the Trilogy” in either Deely 2008: iii–vii or 2009: iii–vii, esp. iii note 1 in the latter reference, which has a further clarification.

the thing in question is a biological organism capable of sensation, then this process of semiosis takes on a cognitive dimension (a dimension of “awareness”), and the signifieds become objects. So that is perhaps the first and most important feature of semiosis to be noted in thematically developing the doctrine of signs, or semiotics: there are no objects without signs, for the sign is what every object presupposes.⁶

Now we can answer the question of why, if the universe *as experienced* consists exclusively of signs (even though the objects experienced are commonly things of brute Secondness and not *only* signs in the order of Thirdness), we become aware of objects before we become aware of signs. The first being signs have, as far as the cognitive aspect of the life of organisms is concerned, is that of objectifying those aspects of the physical surroundings which are proportioned to the channels of cognition which the organism develops in the course of its physiological maturation. The organism is itself a physical part of the physical surroundings. It acts on the things around it, and the things around it act upon it. Those of these interactions which fall within the range of the sense powers become the sensible Umwelt, or world objectively sensed by and for that organism. But if the Innenwelt upon which the Umwelt as such depends were not *already* engaged in semiosis, there would be no Umwelt – only a physical environment not just independent of mind but unknown by any finite mind at all!

But immediately a new level of complexity arises within these bare physical interactions, of themselves a matter of Secondness rather than Thirdness necessarily. The organism, again as biological, has needs which make it want something from the surroundings of which it becomes aware – food at the minimum, affection too in the case of so-called “higher” organisms. So the organism does not just become aware of “what is there”; it becomes aware of *things to be sought* and *things to be avoided* in its surroundings, as well as of things deemed (mistakenly or not) “*safe to ignore*”. The organism deals not with pure sensations, but with objects; and objects are sensations organized according to the nature, wants, needs, and desires of the organism having the sensations.⁷ In other

6. Deely 2004. Thanks to Katre Pärn of the Tartu University, a dramatic version of this point can now be seen at

<http://www.youtube.com/view_play_list?p=E9651802BCDC14BF>

7. Cf. Cajetan 1507: *Commentaria in 1 Summa theologiae*, question 1, article 1. Then Poinso 1632: Book I, Question 2, 149/41ff., Question 4, 187/28–190/23; Book II, Question 1, 235/36ff., Question 5, 270/37ff.

words, the sensations doubtless occur *in* the organism, but not merely as part of the organism's subjective being do they function in the perception of objects. No. As part of the individual organism's subjective being they are merely more individual characteristics, but as individual characteristics they serve to give rise to and provide a ground for relations by nature suprasubjective and terminating in what the individual with all its characteristics is not, namely, the physical environment as objectively organized in this or that way (and in each case species-specifically, as we have seen, as well as through individual differences).

So the environment as *Umwelt* is not merely sensed but perceived. And as perceived it has an objective organization that is different from the common physical organization operative among the things of the physical environment either as common to all organisms or also as causing sensations for some organisms in the first place. At the same time, though the objective organization of the *Umwelt* is necessarily and in principle different from the physical organization of the environment as such, the objective organization of the *Umwelt* also necessarily and in principle includes something of the physical environment in its proper being. The monkey swinging on a branch has to make a perceptual judgment not only that the branch is there but that it will carry his weight. If the perception is wrong injury or even death can result. Such mistakes occur all the time. If the thing encountered in the environment and perceived as good to eat is in fact incompatible with the physiology of the perceiving organism, illness or death can be the result of the mistaken perception.

On the other hand, the very fact that we survive for periods in good health and vigor is testimony to the fact that perceptions often are right in the organization of the physical environment cognitively effected on the basis of sensation. This of course is a question of practical knowledge. But were it not for the fact that practical knowledge ("animal realism" as I have elsewhere termed it) already has a handle on the physical nature of objectified things, speculative knowledge – the development of science (as ideoscopic knowledge) and philosophy (as cenoscopic knowledge) – would not merely be a waste of time, it would not even be possible in the first place.

The perfusion of signs and postmodernity

Objects, then, are first of all (but not reductively) things as and of which we have become aware. As things objectified, they participate *both* in the physical nature of that which has been objectified among the many further

elements of the physical environment *and* in the biological nature of the organism for and on the basis of whose characteristics the objects in question have been organized and constituted to form an Umwelt.

At once a strange thing begins to happen. The objects of the experienced world which began only by presupposing signs (the semiosis of interpretive representations formed in the Innenwelt relative to the sensations provoked by the physical surroundings), almost at once (if not at once!) begin themselves to turn into signs. Smoke the first time perceived is merely an object, something of which we have become aware by reason of our biological nature and spatio-temporal circumstances. But this object soon afterwards, sometimes at once (depending precisely on historical accidents), comes to exist within our experience as a sign of something burning. The same happens with clouds and rain, flag and country, uniforms and police authority. Objects as organized within an Umwelt function as signs of one another and of what is desirable and undesirable and safely ignored within that objective world. We may call this transformation of objects into signs their *social function*, but only if we well understand that this “social function” carries within it the possibility of giving rise to an understanding of the very physical being that, as we have seen, is involved in the physical aspect of the being of objects as sensed in the first place – sensed in order for interpretation (concept-formation) to become possible in the first place. Sensation of itself is selective only but not interpretive; interpretation is the work of sense-perception englobing but prescissively distinct from the sensation upon which it depends.

Indeed, science and philosophy began in ancient Greek Ionia when the otherness of the environment began to be thematized in its irreducible being as “the nature of things”. Along the way, philosophers lost sight of the fact that the “nature of things” in the outer world, the physical environment as surrounding us, can only be known through its intimate connection with and as founded upon the inner world of our personal selves. (The physical environment does not depend upon there being animals, but the Umwelt emphatically does depend upon animals: No Umwelt without an Innenwelt.) Modern science awakened (or reawakened) the philosophers to the connection, to the realization that objects as such exist only in and on the basis of our awareness. But the modern philosophers failed to realize that this very existence of objects *already presupposes* signs which entangle the knower in the common physical being which surrounds every knower. Perception presupposes sensation, and sensation is *already semiotic*. What idealism came to mean in modern

philosophy is exactly the failure to realize that objects experienced do not merely *become* signs, they also *presuppose* signs. *Every* object is something signified. Significate and object are two ways of saying the same thing (Deely 2009a). But what the first term says openly the second term tends to conceal – to wit, the dependence of *objectification* upon *signification*. “Objectification”, thus (it turns out!), is nothing more nor less, nothing other than, semiosis at work among cognitive organisms.

When any cognitive organism becomes aware of this dependence of objectivity upon semiosis as a fact (this is what constitutes the first stirrings of “metasemiosis”, as mentioned above), even when the full extent of the dependency is not yet realized, semiotics begins. Modernity was born oblivious to this fact, and continues only so long as this oblivion continues: it is, to borrow Sebeok’s term, a “cryptosemiotic interlude”.⁸ That is why “semiotics” and “postmodernity” are, like “signification” and “objectification”, but two synonyms, two ways of saying the same thing. But one – semiotics – so says it as to make the point of the death of modernity unmistakable, while the other – postmodernity – so expresses the point as to make it possible for the very ones using the term to remain ignorant of the historical import of that which they say.

For the moderns, signs are a certain kind of object or (as in the case of those would-be postmoderns called “deconstructionists”) a certain way of looking at objects. Semiotics knows that signs are more than this. They are neither a class of things nor a point of view, but a suprasubjective function, without which the universe would not be what it is. Semiotics begins with the realization not merely that there are signs but more fundamentally that the essential being of the sign is not reducible to any form of subjectivity, not that of the knower, not that of the known, not that of the things making up the physical environment. Semiotics begins with the realization that a being proper to signs, like any other form of being whatever, is possible only through and as long as there is a corresponding proper activity taking place. So semiotics comes into its own with the discovery that the universe is not something that we come to know except insofar as signs are at work in the universe, not only in our individual and species-specific experience, but also in the making possible in the first place and continuing occurrence of that experience.

8. For a presentation of the overall history of semiotics divided into the periods of presemiotics, protosemiotics, cryptosemiotics, and semiotics proper, see the “History of Semiotics” article (Deely 2006).

Semiotics, beginning with the realization that there are signs which transcend and interconnect the individual forms of subjectivity (both in making them known and letting them be), reveals on further reflection that this perfusion of signs in the universe is because there is nothing that the sign does not involve. Objects through experience dissolve into signs, but they come into being in the first place only on the basis of the action of signs as involved in the physical interactions of things. And, as incorporating something of the physical environment, objects continue as object even as they further dissolve into further signs. Semiosis is not a process that does away with objectivity. Objectivity is simply the proper effect of semiosis as it occurs among cognitive organisms. And when those cognitive organisms not only make use of signs, as did the inorganic world before them, but come to be aware that there are signs, the possibility of semiotics proper begins.

If we situate the realization of that possibility within the history of philosophy down to the present, then we see, without getting into the details of the differences between semiology and semiotics, why “post-modernity” for intellectual culture – at least if it is to be more than a nominalism – can only be another way of saying “semiotics”. I never had the chance fully to discuss this thesis with Tom,⁹ but it became increasingly clear to me in his last years that, whatever he himself may have thought on the matter (certainly “postmodern” *as a term* he despised, because of the thinkers with whom it was most publically associated and the rhetoric they employed, as he saw it, irresponsibly), he was solidly affirmative of a noetic that trashed the “ne plus ultra” of the ‘epistemology’ that defined modern philosophy as, and confined it to, solipsism.

Transitioning from modern to postmodern: The change of age

Early in the twentieth century, if not indeed in the closing decades of the nineteenth century, two pioneer figures, independently, undertook to open up and explore the way of signs. The elder was an American philosopher, Charles Sanders Peirce, born in 1839. His younger contemporary was a Swiss linguist, Ferdinand de Saussure, born in 1857. They died within

9. Though he did commission a Special Issue of *Semiotica* on the basis of the publication of my book (Deely 2001) proposing semiotics as the logically proper definition of the term “postmodern” – a Special Double Issue Guest-Edited by Susan Petrilli and John Hittinger, *Semiotica* 178–1/4 and 179–1/4 (2010).

a year of one another, Saussure in 1913, Peirce the following year. What a heritage they left between them! Saussure called it “semiology”,¹⁰ Peirce called it rather “semiotic”¹¹ (with some variants¹²). But there was also this difference in the reception of their work: outside of a small circle of American philosophers, very few paid any attention to Peirce’s own work and, even when they did, the attention had no clear focus on semiotic; Saussure’s proposal of “semiology”, by contrast, took the intellectual world by storm. When, toward the middle 60s, Peirce’s semiotics began to come into contrastive focus with the semiology of Saussure (curiously called rather “semiotics” in Soviet circles, while yet remaining semiological through and through), it was largely in the context of semiotic initiatives launched by Sebeok as an organizational, editorial, and publishing genius.

Peirce became the first of the postmoderns in philosophy¹³ in recognizing that the action of signs, semiosis, is the key to objectivity and to the sorting out of objects in terms of being and nonbeing, *ens reale* and *ens rationis* – or (to put it another way) is the key to reintroducing *ens reale* into the objective world of direct experience without separating it from those objectivities (*entia rationis*) that owe the whole of their reality to the experience within which they achieve representation on the side of subjectivity, the side of the mind’s own workings as giving rise to relations of awareness. Petrilli and Ponzio, in their recent study of Sebeok’s work,¹⁴ capture the postmodern essence of the way of signs exactly: “there is no doubt that the inner human world, with great effort and serious study, may reach an understanding of non-human worlds and of its connection with them.”

The case of Saussure’s semiology was quite otherwise. If we are to contrast it with the semiotics of Peirce, then we would have to say that semiology is ultramodern rather than postmodern. For the thesis of semiology is exactly that of modern philosophy, tailored now exclusively to the case of signs as created within human experience: convention, unquestionably the work of the mind and insofar *ens rationis*, is that to

10. See Saussure 1916: 15–17.

11. Peirce c.1897: esp. CP 2.227.

12. See Deely 2003.

13. The details of the case, set forth in the context of the entire history of philosophy between approximately Thales (c.625–c.545BC) and Eco (1932–?), are in Deely 2001.

14. Petrilli and Ponzio 2001: 20.

which the analysis of all signs, even those which appear to have some independence of mind, must in the final analysis be assimilated.¹⁵ The ancient Greeks thought of signs wholly in terms of nature.¹⁶ The moderns (the philosophers among them, at least) had come to despair of “nature” as a knowable realm, and so could think of signs only and wholly in terms of convention. So it was with Saussure and his followers, both in the Soviet sphere (after Lotman) and throughout the West.

We see then that in the symbolic contest for naming the doctrine of signs, “semiotics” and “semiology” were never on the same footing, even though, for a long time, many mistakenly¹⁷ held (and a few still try to hold) the opinion that they were alternative names for the essentially same enterprise.

The first one clearly to begin the proceedings of intellectual divorce from modernity’s epistemology, a divorce needed for the doctrine of signs to fulfill its potential was, curiously enough, like Saussure himself, a linguist, namely, Thomas A. Sebeok. Sebeok entered the fray never under the banner of semiology, but from the first seeing himself rather as a semiotician – not a “semiotician” in the Eastern European usage of those who embraced Saussure’s *signifiant/signifié* model, but in the distinctive sense rather established first by Poinsoot and later also by Peirce (whose work Sebeok came to know before he learned of the earlier demonstrations of Poinsoot) which distinguished sign in the sense of sign-vehicle from sign in the sense of triadic relation as constituting the formal being of all signs.

The biography of Sebeok has yet to be written.¹⁸ Born in Hungary in 1920, he studied first at Cambridge and then at Chicago. When the war broke out, he became involved, first as an OSS officer and later as a faculty member of Indiana University, Bloomington, with General Marshall’s plan to use the universities for developing language programs for infiltration of agents behind enemy lines, notably in Eastern Europe.

15. Saussure is quite explicit on the point, in the passage referred to above (1916: 15–17). Compare Sebeok 1984b and 1996, or Poinsoot 1632.

16. Manetti 1993; Deely 2001: esp. Part I, and 2009; Eco, Lambertini, Marmo, and Tabarroni 1986.

17. If the adverb here seems harsh, please see the fuller discussion in Deely 1995 as well as 2001, 2003, and 2003a.

18. A start at least has been made in the recent small book by Petrilli and Ponzio 2001, but the family history and context of Sebeok’s Hungarian childhood is a tangled web that will take exceptional linguistic knowledge and scholarly motivation to unravel.

It was thus that the seeds were planted, for example, for the marvelous program in Uralic and Altaic studies which continues today as one of the crown jewels in the intellectual prominence of the Bloomington campus. Sebeok was involved not only in linguistics, but also in anthropology and folklore. Eventually he came to head the Research Center for Language Studies (RCLS), promptly changing its name to the Research Center for Language and Semiotic Studies (RCLSS). Under his direction, through his vast publication projects and involvement in academic organizations, the RCLSS soon became a global headquarters in the development of semiotics. Though I am prevented here from the detailing and dating of Sebeok's academic projects leading up to and surrounding the significant name-change from RCLS to RCLSS, suffice for the present purpose to note that, as a Cambridge undergraduate around 1938, he had read the celebrated *Meaning of Meaning* book by Ogden and Richards,¹⁹ which sparked an interest that soon enough germinated into his full-scale involvement with the project of establishing the doctrine of signs both in its foundations and in the full scope of its possibilities.

Even if, by comparison with Peirce and Saussure, Sebeok was something of a late-comer in the twentieth century discourse about sign, his association with Jakobson and study at Chicago under Morris early led him to an awareness of Peirce in terms of the rich semiotic context that the workings of language presuppose. To this context²⁰ his background in anthropology and folklore as well as linguistics further keyed him. So when he took on the various philosophical considerations the action of signs involves, he was never hampered by a formal training in philosophy which had narrowed itself to the truncated late modern perspective styled "the linguistic turn", treating, or mistreating,²¹ of language as if it were somehow an isolated or closed and autonomous system.

If we look at the American academic scene in terms of the gestation of semiotics, Sebeok's distinctive presence outside the academic groves of Bloomington begins to be felt in an overpowering way in the early 1960s, first with a review of work on bees, porpoises, and dolphins,²² then with a major conference,²³ and tirelessly thereafter promoting his thesis that the

19. Ogden and Richards 1923.

20. A veritable "nonverbal inlay in linguistic communication", as I have put it (Deely 1980).

21. See Deely 2006a.

22. Sebeok 1963.

23. Sebeok, Hayes, and Bateson 1964, the proceedings of a 1962 conference.

“sign science” (which he, like Poinsett, Locke, and Peirce before him preferred rather to term a “doctrine” in the philosophical sense contrasting with science in the modern sense²⁴) is as broad as the science of life itself.²⁵ Sebeok himself, taking “semiotics” as the umbrella term for the doctrine of signs in its full extent, proposed “zoösemiotics” for the study of signs among animals without linguistic communication. He proposed also “endosemiotics” for the study of the action of signs among micro-organisms living within and upon macro-organisms. In 1981, his program for extending the boundaries of semiotics at least as far as the life science as a whole received a boost from the work of Martin Krampen, with his study of the action of signs among plants under the label “phytosemiotics”.²⁶ By 1996, Jesper Hoffmeyer was able to publish a full programmatic statement of Sebeok’s original proposal,²⁷ and today “biosemiotics” is well-established as an umbrella term signifying that the action of signs extends at least as far as the frontiers of life itself, both synchronically and diachronically.²⁸ (Indeed, when we consider the “Tartu synthesis” that Sebeok made of the work at Tartu University of Jakob von Uexküll as a German Estonian with the work of Juri Lotman as a Russian Estonian, combined with the biosemiotic development taken up from Sebeok in Estonia by Kalevi Kull and by such Danish thinkers as Claus Emmeche and Jesper Hoffmeyer, we may speak of a “Tartu-Bloomington-Copenhagen school” of semiotics in the 21st century, quite supplanting and eclipsing the much narrower “Tartu-Moscow school” of the 20th century.)

Thus it was that Sebeok came to semiotics *auf den Sachen selbst*, and independently of both Peirce and Saussure, both of whom he studied in light of his own prior interest in matters semiotical. This is an important point that needs to be brought into general recognition: the “contest” in North America, and even globally, in the matter of signs was not between Saussure on one hand and Peirce on the other hand. Saussure in the middle 20th century years was the figure of unquestioned dominance in the matter of a new “science of signs”. Peirce was a sideline figure, of interest only to few – though that few had an influence on Sebeok; and it

24. Sebeok 1976; Deely 1978, 1986.

25. E.g., Sebeok 1990. Cf. Deely 1991.

26. Krampen 1981. Reprinted in Deely, Williams, and Kruse, eds. 1986 – a volume exposing the “*pars pro toto* fallacy” required to mistake semiology as naming the doctrine of signs in its full extent as semiotics.

27. Hoffmeyer 1996.

28. See Hoffmeyer and Emmeche Eds. 1999; Kull Ed. 2001.

was Sebeok, not Peirce, whose efforts organizationally, editorially, and sociologically, that “turned the tide” away from the erroneous view that the particular vehicle of semiosis that we call “linguistic” provides a model for the whole of semiosis. It was through those efforts that Peirce – and not only Peirce, but also Poinset, Peirce’s main predecessor in the matter of realizing and demonstrating that the being of signs consists formally in a relation triadic in nature – justly came to the forefront of prominence in semiotic discussions generally. For Sebeok, it was never a question of “Saussure vs. Peirce”, but of a part of a subject-matter being mistaken for the whole of a subject-matter: a question of overcoming the *pars pro toto fallacy*; and it was in the context of this effort that the attention of semiotists came to be focused on Peirce as presenting a far more comprehensive view of semiosis than was possible in Saussurean terms.²⁹

Sebeok had seen at once that Saussure’s program was too narrow to support a study of signs in the totality of their action; and Sebeok never shared the blindness of the twentieth century philosophers who saw in Peirce little more than a variant on the modern theme of “pragmatism” in philosophy.³⁰ Though Sebeok himself never entered into the debate over the difference between *pragmatism* (which is compatible with idealism in philosophy and generally embodies late medieval nominalism) and Peirce’s own *pragmaticism* (which has as part of its essence scholastic realism of the medieval variety incompatible with every species of nominalism), Sebeok

29. Still, semioticians remain close enough to modernity to suffer from its greatest deficit: lack of knowledge of or interest in the historical dimension of human thought, especially in the cenoscopic matters of philosophy and semiotics. When Descartes advised “not to read the Latins” for fear of infection with their errors, he met with his greatest success. Peirce, the only mainstream modern fully to disregard this advice (which, truth to tell, had merit in the days immediately following the Galileo affair), was repaid in his efforts by a rediscovery of “the doctrine of signs” (see Beuchot and Deely 1995). Yet the *followers* of Peirce, even today, tend more to be “moderns” in this regard than “postmoderns”, i.e., in this matter of ignorance of the protosemiotic development between Augustine and Poinset, most especially of the crucial phase between Ockham and Poinset. And despite Peirce’s own example, reinforced indeed by his advice on “ethics of terminology” (see Deely 1994, 1998), contemporary Peirceans tend to argue as if semiotics itself were a matter of “choosing Peirce” over Saussure, which is only one aspect of the much larger and more interesting story of the doctrine of signs.

30. The blindness in question is thoroughly a function of the novelty to philosophers of what Peirce called the “ethics of terminology”: see Peirce 1903, commented on in Deely 1998 and 2001: Chapter 15.

always studied both Saussure and Peirce alike *precisely through semiotics* – a science (albeit cenoscopic)³¹ that, like every science, is never reducible to or identical with any personality or one person's work, however great, associated with the science's development. For it is always in the long run the object of inquiry, rather than the inquirer, that ultimately determines and shapes the knowledge that inquirers share with their fellows in constituting a "community of inquirers".

Consequently, Sebeok saw in the work of Peirce the "lodestar"³² for the development of a doctrine of signs in its full and foundational sense (such as Poinsoot had culminated the protosemiotic development by outlining – only to disappear under the sands of time as they accumulated in the modern "cryptosemiotic interlude"), not because, as is still the mistaken common view, Peirce was the first to identify triadic relation as the being proper and formal to the sign (which he was not) as the foundation of semiotics, but rather because in introducing the distinction between *interpreter* and *interpretant*, the latter of which "need not be mental", Peirce had opened the way to what I would describe as "the full vista of the action of signs".³³ This was the aspect of Peirce's semiotic – what I have called (1989) his "Grand Vision" – that was revolutionary, and that places his work in the forefront of semiotics as the postmodern development and guise of philosophy itself as the most basic form of cenoscopic science.

Thus, in the symbolic contest between "semiology" and "semiotics" as labels for the way of signs in the European and North American contexts,

31. The distinction between ideoscopic and cenoscopic science, taken from Peirce (who himself took it from Bentham), has only recently begun to be bandied about in mainstream semiotic literature (see esp. Deely 2008, for the historical "point of application" where the terminology has a decisive bearing, namely, in the transition from the medieval commentary tradition to the modern tradition of experimentation). Sebeok himself, as far as I recollect (and as Williams' essay in this volume details historically the development of Sebeok's own terminology and stance for semiotics) never availed himself of this precise distinction, but used rather its effective counterpart, namely, the reservation of the term "science" to the ideoscopic sphere and the application of the term "doctrine" to the cenoscopic sphere, of which semiotics provides the general framework and base out of which develops even the ideoscopic sciences of modernity – it is a great achievement, in sharp contrast to the quicksand of solipsistic epistemology in which the modern philosophers met their fate. See further Deely 2009, 2008, and Ashley 2006.

32. Sebeok 1984.

33. This is the title of Chapter 12 in the 5th edition of *Basics of Semiotics* (Deely 2009b).

Sebeok was “just always there”, as Robert Klein, the Director of the Loras College Library remarked to me,³⁴ “shaping the outcome of the discourse” Saussure in part and Peirce in full had seeded, but Sebeok above all others nurtured to full flower.

Certainly a major turning point in the developing discourse was the 6–7 May 1980 session of the New York Academy of Sciences organized and chaired by Sebeok and Rosenthal.³⁵ This program effectively gave the lie to all claims of “language training” for nonhuman animals. The program exposed the experimental foundations for what would eventually become central to the development of semiotics as a whole, namely, the distinction between “language” as such in contrast with “communication”, a much broader phenomenon. Language belongs to the species-specifically human modeling system or “Innenwelt” as not wholly tied to biological heritage, whereas “communication” generically is not linguistic, but is rather a universal phenomenon of nature sharply exacerbated in the realm of animal behavior to the point of confusion with “language” in the human sense of linguistic communication consequent upon exaptation of language as a species-specifically human component of the generically animal modeling system to form conventionally based codes for the correlation of objective structures with sensibly accessible sounds, marks, or movements as spoken, gestured, or written “language”.³⁶ But the objective grasps of the trained animals, Sebeok pointed out, always *end* as well as *begin* at the level of the sense-accessible phenomena as such, in sharp contrast with what is distinctive of linguistic communication as such, which terminates quite normally (though not always) at what can be *understood but not perceived* directly – such as a civil office or a law non-compulsorily regulative of behavior within human society alone.

By 20th-century’s end, as a result of Sebeok’s tireless work, organizational, editorial, and authorial, Sebeok’s own version of Peirce’s earlier “grand vision” for semiotics³⁷ had, we can say, virtually displaced Saussure’s semiological model for the study of signs within our intellec-

34. Conversation of July 14, 2001.

35. Sebeok and Rosenthal 1981; see also Sebeok and Umiker-Sebeok eds. 1980, and Umiker-Sebeok and Sebeok 1979–1981b.

36. Sebeok 1984a, 1987; Deely 2001: 5–12.

37. A vision, be it noted, that Peirce himself felt that he had failed to justify beyond the boundaries Sebeok would later independently draw as those of “life-science”: see the discussion from the 1989 Harvard Peirce Congress in Deely 1989, and Chapter 12 in Deely 2009b.

tual culture. This reversal of symbolic fortunes of the competing terms “semiology” and “semiotics”, their reversal of ascendancy, as it were, mirrored the ever-growing influence of Sebeok³⁸ in the development of semiotics. With Sebeok today we speak of semiology as a comparatively European phenomenon of late modernity, and of semiotics as a global phenomenon.³⁹ Even though the intellectual foundations for the phenomenon were laid first by the Latins and uncovered and extended to end modernity by Peirce, as the twenty-first century opened it was to Sebeok above all that credit belonged for “global semiotics” as a phenomenon of intellectual culture, the reality of an international community of scholars pursuing through a huge variety of methods and nascent academic programs the “way of signs”. Less and less we hear of semiology proposed as an adequate perspective for the problem of the sign, more and more of semiotics.⁴⁰ And semiotics, unlike semiology, is not confined to cultural studies and literary criticism, but embraces even the content itself of physical science for what it is at its best *as* science, namely, an action of signs integrating awareness of the physical world according to its own being (just what modern “epistemology” precludes as “not possible”!) into our consciousness.

We understand any development, as Aristotle first dwelt upon at length, more from its outcome than from its beginnings (for even the beginnings reveal themselves as such only in light of the outcome). Even though the

38. “Sebeok and his Marshalls”, as might be said (to borrow intersemiotically from either Headley 1846 or Macdonell 1934), such as Danesi in Canada; Kull in Estonia; Tarasti in Finland; Petrilli and Ponzio in Italy; Santaella-Braga in Brazil; Yamaguchi in Japan; Tasca in Portugal and France; Rauch in the United States; Marcus, Brinzeu and Neț in Romania; Harnau in Moldova; Block de Behar in Uruguay; Orosz and Voigt in Hungary; Popova in Bulgaria; Johansen in Denmark; Krampen in Germany; Lagopoulos in Greece; Ruthrof in Australia; Cobley in England; to give an incomplete list. (In this analogy, I suppose, Eco would figure as Bernadotte; but every analogy limps.)

39. Sebeok 2001, his last book in his lifetime.

40. Yet it often proves that semiology as a pretender to being the whole of a “science of signs” has not so much been overcome as gone underground. Thus, we find still today authors who glibly propose that “semiology” and “semiotics” are synonymous equivalents (Robey 1989), as also authors who misrepresent semiological analysis as constituting what is “basic” to semiotics itself (Chandler 2002). Thus, while Sebeok successfully overcame semiology as a *pars pro toto fallacy*, there remain a few not uninfluential authors who have managed to molt the overcome fallacy into an operative *pars pro toto fraud*.

contemporary development of semiotics begins more or less at the dawn of the twentieth century with Charles Peirce and his recovery from the late Latins of the doctrine of the sign consisting in an irreducibly triadic relation together with his distinction of *interpretants* from *interpreters*, that development has been principally mediated by the work of or associated with Thomas Sebeok. As the twenty-first century opens, the main question for the further development of semiotics – How far does the paradigm for the action of signs extend?⁴¹ – requires to be interpreted through terminology established by Peirce and Sebeok taken together.

Summing up “semiotics today and tomorrow”

In broad strokes, the contemporary debate (where “contemporary” means the dawning of the 21st century’s second decade) among those pursuing the way of signs may be summarized as follows. There is general agreement that the action of signs, “semiosis”, extends at least as far as awareness or cognition occurs, which includes the entire domain of animal sign usage, or “zoösemiosis” as Sebeok proposed it. This extended purview already defeats the proposal Saussure embodied in the semiological model of sign, which, as we have seen, would have reduced the study of sign to a variant of anthropology within modern idealism, the philosophical doctrine (distinctive of modernity) according to which the human mind knows only what that mind itself constitutes or makes.

There is general agreement, further, on the model of sign operative within semiotics: every sign consists in a relation connecting three terms. One term performs the function of other-representation (which Peirce calls accordingly the “representamen”); a second performs the function of self-representation or objectification (which Peirce calls the “object signified”, a somewhat redundant expression); and a third term performs the function of relating within the signification itself (even when the representamen or sign-vehicle is a natural event, such as a volcano belching smoke) the representamen to the significate. Establishment of a relation so constituted completes the triad⁴² on the basis of which Peirce – following his Latin predecessors (so difficult for his late modern followers to acknowledge) from whom he learned the fact – identified the sign strictly so called with

41. Fittingly, a symposium along precisely these lines was organized in February of the twenty-first century’s first year (Nöth 2001).

42. And on the important yet heretofore underdeveloped difference between a *triad* and a *triangle*, see Deely 2009c, and 2010a.

a triadic relation, and only loosely with the representamen. (Thus Peirce, exactly as did the Latins before him, Poinsoot in particular,⁴³ distinguished between signs *loosely so-called*, which are strictly representamens, and signs *strictly so-called*, which are the triadic relations themselves and as such,⁴⁴ in contrast to each and every one of the three terms united within the sign, and in contrast to the objects related within the web of sign relations. “Thirdness is the triadic relation”, as Peirce 1904 so well summarized in CP 8.332, “considered as constituting the mode of being of a sign” – incognizantly echoing the conclusion of Poinsoot 1632: 154/27–29, that “significate directly and cognitive power indirectly are attained by one single sign-relation, and this single triadic relation is the proper and formal rationale of the sign.”)

The “open question” within semiotics today, thus,⁴⁵ is not whether semiology is co-ordinate with or subaltern to semiotics, but only whether semiotics is broader even than zoösemiotics. On this question two positions have emerged.

The comparatively conservative position

There is the comparatively conservative position (how ironic for time to cast the revolutionary figure of Sebeok in such a pose) which would extend semiotics to the whole of living things, plants as well as animals and microorganisms. The conservative faction in the matter of whether the action of signs, and hence the paradigm of semiotics, can be extended beyond the sphere of cognitive life has rallied around Sebeok’s coinage, the label of *biosemiotics*.

The “final frontier”

The more radical faction (chief among which must be counted Peirce himself⁴⁶) does not quarrel with the inclusion of phytosemiotics along with zoösemiotics and anthroposemiotics under the umbrella of semiotics,

43. Poinsoot 1632: Book I.

44. Thus, as I pointed out in the Editor’s Preface, ¶22, of the Intalex electronic edition of Poinsoot 1632, “the intersubjectivity of experience is but an extension of, and participation in, a prior suprasubjectivity and intersubjectivity that permeates physical nature itself. This prior omnipresence of relation in physical nature, indeed, is the atmosphere whereby the universe is ‘perfused with signs’”. Cf. Peirce 1906: 5.448n1.

45. Fittingly, the opening months of the opening year of the twenty-first century were marked by a formal conference addressing just this question: Nöth 2001.

46. And recently also Corrington 2000.

but argues that even this extension leaves something out, namely, an involvement of semiosis within the physical universe at large which surrounds biological life and upon which all life depends.

Heretofore the development of the physical universe as able to spawn and support life has been studied under the rubric of *evolution*. The radical faction in semiotics today argues that what is distinctive of the action of signs is the shaping of the past on the basis of future events, and on this accounting the action of signs (or “semiosis”) can be discerned even in the rocks and among the stars – a veritable *physiosemissis*. Theoretical justification and practical exploration of this hypothesis marks the final frontier of semiotic inquiry.

This frontier is “final” only in the sense that, if we except the hypothetical case of angels, or finite pure spirits (Deely 2004a), there is nowhere left in the universe of finite being for semiosis to be looked for, it having now been found to occur (if the notion of physiosemissis be finally vindicated) wherever finite beings interact, though indeed without being “the whole story” of such interaction (as the baseless suggestion of a “pansemiotics” would inevitably imply⁴⁷). So it is the extent of the occurrence of semiosis that justifies Peirce’s proposal⁴⁸ that the universe as a whole, even if it does not consist exclusively of signs, is yet everywhere perfused with signs.

The boundary of the transition from modern to postmodern

This debate within semiotics turns out to have carried philosophy itself beyond modernity and the paradigm both of knowledge and, more

47. The fullest discussion to date of this baseless – not to say misguided – terminological proposal of a “pansemiosis” (or, correlatively, “pansemiotics”) is found in Stjernfelt and Deely 2006.

48. Peirce 1906: 5.448n1: Having drawn “the proper distinction between the two kinds of indeterminacy, viz.: indefiniteness and generality, of which the former consists in the sign’s not sufficiently expressing itself to allow of an indubitable determinate interpretation, while the [latter] turns over to the interpreter the right to complete the determination as he please”, Peirce (1906: CP 5.448n1) continues: “It seems a strange thing, when one comes to ponder over it, that a sign should leave its interpreter to supply a part of its meaning; but the explanation of the phenomenon lies in the fact that the entire universe – not merely the universe of existents, but all that wider universe, embracing the universe of existents as a part, the universe which we are all accustomed to refer to as ‘the truth’ – that all this universe is perfused with signs, if it is not composed exclusively of signs. Let us note this in passing as having a bearing upon the question of pragmatism”.

recently, of language that modernity embodied in its identity as a distinct philosophical epoch. Within semiotics, the man who – more than any other – shaped the development of the discourse and the terms of the question which reveal for semiotics its final frontier has been Thomas Sebeok.

That is why the twentieth century, in matters semiotical, has been appropriately termed “Sebeok’s century”.

That is why the theme of the posthumous 2003 Imatra gathering was named “The Sebeok Century”.

That is why this same theme was announced to symbolize the last annual gathering in the 20th century of the Semiotic Society of America (which Sebeok founded in 1975–76), in what turned out to be the last year of Sebeok’s life as part of the external world of everyday academe and inquiry. I have from him in my library a signed copy of the program of that meeting titled “Sebeok’s Century”.

At the near boundary of the transition: Tom

So we see that to whatever extent semiotics pertains to the positive essence of a postmodern intellectual culture, just as Peirce before Saussure stands at the (relative to ourselves) far boundary of the transition, so the figure of Sebeok stands at the near boundary.

From the global semiosis which brought about life more than four million years ago, to the global semiotics of the twenty-first century in which a consciousness of that process has begun to be embodied, is the very trajectory that Thomas A. Sebeok himself embodied in his work. He was, if not the first, surely the fullest embodiment of semiotic consciousness so far, since Augustine introduced the thematic possibility of such consciousness with his essay of 397AD. As late as his essay of 1991, Tom told us,⁴⁹ he was still struggling to make clear “the fact, not then self-evident” – as by 2001, the last year of his rich eventful life, the fact in question had, for many, finally become self-evident⁵⁰ – “that each and

49. Sebeok 2001: ix.

50. The medieval Latins commonly distinguished two kinds of propositions under the heading of “self-evident” (*per se nota* or *selbstverständlichkeit*), namely, those self-evident to anyone understanding the immediate sense of the terms themselves from which the proposition is formed (*propositiones per se nota quoad omnes*), and those self-evident only “to the wise”, i.e., to those who

every man, woman, and child superintends over a partially shared pool of signs in which that same monadic being is immersed and must navigate for survival throughout its singular life.”

It is not easy to capture the private side, the *Innenwelt*, of this most complex of men, who seemed to live in order to build for the *Umwelt* of public life a new edifice of intellectual culture wherein the human being would finally realize systematically its uniqueness as the only animal able to know that there are signs beyond the making use of and depending upon signs at every level of its life and existence. Organizations and publications sprung up under his hand as tricks from the hand of a magician. The organization whose intellectual record in the United States is most closely tied to Sebeok’s organizational skills is, of course, the Semiotic Society of America with its series of “Proceedings” volumes from 1980 up through 2011 (and, we must hope, beyond). This organization sprang from Sebeok’s genius in an organizational meeting of 1975 in Tampa, Florida,⁵¹ which resulted in the incorporation under its Constitution for the first formal Annual Meeting in Atlanta, Georgia, the following year,⁵² of the “Semiotic Society of America” (SSA).

The twenty-fifth Annual Meeting of the SSA, as I mentioned above, was held under the theme of “Sebeok’s Century”,⁵³ yet that meeting was only one of a number of semiotic meetings organized by or around Sebeok

understand not merely the terms as such but the further implications that follow from their arrangement in this particular proposition, who have achieved a grasp of the larger context of intelligibility within which the proposition in question is able to maintain its sense (*propositiones per se nota quoad sapientes*). Tom is saying, by way of Introduction to the final book completed within his lifetime, that the proposition that human experience throughout is an irreducible, labile interweave of sign-relations both mind-dependent and mind-independent, is a proposition that has become self-evident within semiotics by the time we have entered the twenty-first century, a *propositio per se nota quoad sapientes*, something self-evident to semioticians insofar as they have come to understand that the being proper to signs consists in triadic relations indifferently real and unreal according to circumstance.

51. The first North American semiotics colloquium held in Tampa, July 28–30, 1975, at the University of South Florida, and memorialized in Sebeok, Ed. 1977.
52. Of this inaugural meeting, an informal partial proceedings privately edited and published by Charls Pearson survives.
53. See the Editor’s Preface of that title in the *Semiotics 2000* Proceedings volume.

in that quarter century.⁵⁴ When, in Imatra, Finland, in the summer of 2000, Sebeok announced to his incredulous audience at Tarasti's annual International Summer Institute, that this would be his last visit to Europe, perhaps he, who told Susan Petrilli by telephone in his final weeks that "It is very boring to die", had some secret premonition of the end no one else could think of as near-at-hand. Yet only about eighteen months remained.

I think back over the years, over many occasions, occasions that call for volumes to be written, many volumes, and from many points of view. But I will choose to narrate only from one such occasion a little story to close this melancholy. It was the opening day of the 1990 Hungaro-Austrian conference convened to mark the occasion of Tom's seventieth birthday.⁵⁵ The day was to close with a wine and cheese gathering in the early evening, after the last paper, and for the occasion the participants were quietly invited each to prepare a toast in Tom's honor, and at the reception we planned to surprise him with a round of prepared toasts.

Unfortunately for that day, the last scheduled speaker was not able to attend the conference, but had sent a student to read her paper, in French, with explicit instructions to "leave nothing out". Well, the paper was far too long for the time frame. But the student felt bound by her instructions, and the chair of the session was perhaps too intimidated by the status of the author in Tom's circle⁵⁶ to intervene – unfamiliar, it is likely, with Tom's own example in such matters set at the above-mentioned Tampa meeting, when he as session chair simply stepped in between the offending speaker and the microphone to introduce the next speaker when the offending speaker's allotted time expired – a story I reserve for another occasion.⁵⁷

54. Beginning with Bouissac, Herzfeld, and Posner, eds. 1986, there followed: the "International Semioticians' Conference in Honor of Thomas A. Sebeok's 70th Birthday: 'Symbolicity'," held in 1990: first in Budapest September 30–1 October, then in Vienna October 2–4, with the collection of papers presented gathered together and published as the volume *Symbolicity*, ed. by Jeff Bernard, John Deely, Vilmos Voigt, and Gloria Withalm, and published together with the *Semiotics 1990* Proceedings volume from the 15th Annual Meeting of the SSA (Lanham, MD: University Press of America, 1993); Tasca ed. 1995; Tarasti, Littlefield, Inkinen, and Rossi eds. 2000. The small monograph by Petrilli and Ponzio 2001 deserves mention in this context.

55. See Bernard *et al.* eds. 1990.

56. Indeed, the "author in question" is a contributor to this memorial volume.

57. I wrote the incident up in Bari, Italy, February 19, 2002, under the title, "Tom Sebeok, the Man Who Loved Time", for the disposition of Jean Umiker-Sebeok, and now include it in the present volume under the "Vignettes"

Counter to Tom's own practice in running sessions, then (on the one side, feeling the audience impatience but, on the other side, too frightened to succumb to the impatience without the chair's encouragement to bring the reading to an incomplete end), the poor student droned on and on. By the time the session closed, the time allotted for the wine and cheese reception had so truncated that the round of toasts was quietly canceled by the organizers.

Most of the persons at that gathering I was meeting for the first time, so I have no idea how many of the participants had prepared toasts; nor do I know whether Tom ever knew of the planned round. My own toast, undelivered at the reception, we later used to dedicate the Budapest-Vienna volume in which the conference eventuated.⁵⁸ Not until the following year, in fact, at a meeting of the Executive Board of the SSA, as I recall, did I have the opportunity to present this toast in spoken form before Tom himself. In the conversation of the group after, he said to me, with obvious pleasure, "After this, you can refer to me simply as 'Tom'."

Changing present tenses as appropriate, I would like to repeat that toast here to close these remarks around Tom's work *in memoriam*:

*Dr. Sebeok was a man of extraordinary talents,
we all know. That in itself is
not extraordinary.*

*What was extraordinary was what was beneath the talents,
namely, the way they were orchestrated.*

And how was that?

*Dr. Sebeok, somehow,
so directed the play of his own talents that
the talents of all who associated with him
were also brought into play.*

section forming Part 2. We distributed this story to the chairs of all sections of the 33rd SSA Annual Meeting held in Houston, Texas, 16–19 October 2008, with the instruction that the entire meeting was to be run on "Sebeok Time" – i.e., no papers to be given at other than the assigned times as published in the program. The meeting was hugely successful, and "Sebeok time" came to be appreciated by most if not all involved.

58. Bernard *et al.* 1990: iv (see note 54 above).

*He managed in this way
to bring a thousand and more than a thousand individuals
who would otherwise have never known one another
into a kind of intellectual symphony or orchestra
whose works collectively express
– through his direction –
most of what is best
in that movement we call today “semiotics”.*

*We celebrate in this volume
what was extraordinary in Dr. Sebeok,
what the ancient Greeks and medieval Latins would call
his ψυχή, anima, or “soul”.*

May it live forever!

It will in our hearts, and in the life of human culture.

“An academic”, Tom averred on the occasion of his transition to Emeritus status in 1991,⁵⁹ “is the sign’s way of spawning further, more developed academics.” To accomplish this, he went on to say, “there are two fundamental strategies”. First, one must publish and teach “as much as possible”; second, “equally important”, one must do one’s best “to facilitate the success of one’s colleagues in these respects”. Successful execution of these two fundamental strategies, he averred, “are the only things I have ever wanted to do in my academic life”.

He did both splendidly, so well that, in the “external world”, not even his death can bring his twofold movement to a standstill. He was and will always remain the single most important figure in the 20th century defeat of the view that signs concern only the human world of culture.

References

- Ashley, Benedict (3 May 1915–)
2006 *The Way toward Wisdom. An interdisciplinary and intercultural introduction to metaphysics* (South Bend, IN: University of Notre Dame Press).
- Augustine of Hippo (354–430 AD)
i.397–426 AD *De doctrina christiana libri quattuor* (“Four Books On Christian Doctrine”), in *Corpus Christianorum Series Latina* vol. XXXII, ed. Joseph Martin. Turnhout, Belgium: Brepols, 1962.

59. Sebeok 1992: his “retirement” speech, “Into the Rose Garden”, delivered on March 22, 1991, but published only the following year.

- Aquinas, Thomas (1224/5–1274)
 i.1252–1273 *S. Thomae Aquinatis Opera Omnia ut sunt in indice thomistico*, ed. Roberto Busa (Stuttgart-Bad Cannstatt: Frommann-Holzboog, 1980), in septem volumina.
- Aquinas, Thomas (1224/5–1274)
 c.1268/72 *In duodecim libros metaphysicorum Aristotelis expositio*, in Busa ed. vol. 4, 390–507.
- Bernard, Jeff, John Deely, Vilmos Voigt, and Gloria Withalm, Editors
 1990 “Symbolicity”. Papers from the International Semioticians’ Conference in Honor of Thomas A. Sebeok’s 70th Birthday Budapest-Wien, September 30–4 October 1990 (=Sources in Semiotics XI, bound together with *Semiotics 1990*; Lanham, MD: University Press of America, 1993).
- Beuchot, Mauricio, and John Deely
 1995 “Common Sources for the Semiotic of Charles Peirce and John Poinset”, *Review of Metaphysics* XLVIII.3 (March 1995), 539–566.
- Bouissac, Paul, Michael Herzfeld, and Roland Posner, Editors
 1986 *Iconicity: Essays on the Nature of Culture*, Festschrift volume in honor of Thomas A Sebeok, edited by Paul Bouissac, Michael Herzfeld, and Roland Posner (Tübingen: Stauffenburg Verlag), 29–49.
- Brier, Søren, Editor
 2003 *Cybernetics & Human Knowing* (a journal of second-order cybernetics, autopoiesis and cyber-semiotics), 10.1, Special Memorial Issue “Thomas Sebeok and the Biosemiotic Legacy”.
- Cajetan, Thomas de Vio (20 February 1469–1534 August 9)
 1507 *Commentaria in summam theologicam. Prima pars* (Rome: May 2). Reprinted in the Leonine edition of the *Sancti Thomae Aquinatis Doctoris Angelici Opera Omnia*, vols. 4 and 5 (Rome, 1888–1889), used in preparing the present work.
- Chandler, Daniel
 2002 *Semiotics: The Basics* (Milton Park, UK: Routledge). The title of this book is seriously misleading. *Semiology: Some Basics* would be immeasurably more appropriate, inasmuch as the book actually treats parts of semiotics focused exclusively on culture, and derives less from such primary sources of semiological tradition as Saussure, Barthes, or Greimas than it does from later sources in the area of media studies.
- Corrington, Robert S.
 2000 *A Semiotic Theory of Theology and Philosophy* (Cambridge, England: Cambridge University Press).
- Deely, John N.
 1978 “What’s in a Name?”, *Semiotica* 22.1/2, 151–181 (essay review of original 1976 publication of Sebeok 1985).

- Deely, John N.
1980 "The Nonverbal Inlay in Linguistic Communication", in *The Signifying Animal*, ed. Irmengard Rauch and Gerald F. Carr (Bloomington: Indiana University Press), 201–17.
- Deely, John N.
1986 "Doctrine", terminological entry for the *Encyclopedic Dictionary of Semiotics*, ed. Thomas A. Sebeok et al. (Berlin: Mouton de Gruyter), Tome I, 214.
- Deely, John N.
1986a "Pars Pro Toto", Preface to *Frontiers in Semiotics* (Bloomington: Indiana University Press), pp. viii–xvii.
- Deely, John N.
1989 "The Grand Vision", presented on September 8 at the September 5–10 Charles Sanders Peirce Sesquicentennial International Congress at Harvard University, in Vincent Colapietro and Thomas Olschewsky eds., *Peirce's Doctrine of Signs* (Berlin: Mouton de Gruyter, 1996), 45–67.
- Deely, John N.
1989a "A Global Enterprise", Preface to Thomas A. Sebeok, *The Sign & Its Masters* (corrected second printing of the University of Texas 1979 edition; Lanham, MD: University Press of America, 1989), vii–xiv.
- Deely, John N.
1990 "The Sign Science and the Life Science", in "Symbolicity", ed. Jeff Bernard, John Deely, Vilmos Voigt, and Gloria Withalm (Lanham, MD: University Press of America, 1993), 243–52. This volume is bound together with *Semiotics 1990*, ed. Karen Haworth, John Deely, and Terry Prewitt.
- Deely, John N.
1991 "Semiotics and Biosemiotics: Are Sign-Science and Life-Science Coextensive?", in *Biosemiotics. The Semiotic Web 1991*, ed. Thomas A. Sebeok and Jean Umiker-Sebeok (Berlin: Mouton de Gruyter, 1992), 45–75. Since revised as Chapter 6 "How Do Signs Work?", in *New Beginnings. Early Modern Philosophy and Postmodern Thought* (Toronto, Canada: University of Toronto Press, 1994), 151–82.
- Deely, John N.
1994 *The Human Use of Signs; or Elements of Anthroposemiosis* (Lanham, MD: Rowman & Littlefield).
- Deely, John N.
1995 "Ferdinand de Saussure and Semiotics", in *Ensaio em Homenagem a Thomas A. Sebeok*, quadruple Special Issue of *Cruzeiro Semiótico*, ed. Norma Tasca (Porto, Portugal: Fundação Eng. António de Almeida), 75–85. Revised text appears under same title in *Semiotics 1995*, ed. C. W. Spinks and John Deely (New York: Peter Lang, 1996), 71–83.

- Deely, John N.
1998 "The Ethics of Terminology", in the *American Catholic Philosophical Quarterly* Special Issue on Peirce guest-edited by Vincent Colapietro, LXXII.2, 197–243.
- Deely, John N.
2000 "Sebeok's Century", Preface to *Semiotics 2000: Sebeok's Century*, ed. Scott Simpkins and John Deely (Ottawa: Legas, 2001).
- Deely, John N.
2001 *Four Ages of Understanding. The first postmodern survey of philosophy from ancient times to the turn of the twenty-first century* (Toronto, Canada: University of Toronto Press).
- Deely, John N.
2003 "On the Word Semiotics, Formation and Origins", *Semiotica* 146.1/4 (2003), 1–49. Winner of 23rd Mouton D'Or Award for best essay in the field published in the calendar year. See further 2004d.
- Deely, John N.
2003a *Why Semiotics?* (Ottawa: Legas).
- Deely, John N.
2004 "Dramatic Reading in Three Voices: 'A Sign Is What?'," *The American Journal of Semiotics* 20.1–4 (2004), 1–66 (2001i entry above reformatted with numbered lines for presentation as a three-voice dramatic reading).
- Deely, John N.
2004a "The Semiosis of Angels", *The Thomist* 68.2 (April 2004), 205–258. See also:
<<http://www.thomist.org/journal/2004/April/2004%20Apr%20A%20Deely.htm>> and
<http://www.bun.kyoto-u.ac.jp/mdvphil/ksmp/24corrigenda.html>.
Originally presented as a colloquium at the Center for Thomistic Studies of the University of St. Thomas, Houston, at 12:30 hours on Thursday, April 3, 2003.
- Deely, John N.
2005 *Thomas Albert Sebeok and Semiotics* (Sofia, Bulgaria: Published by Tip-Top Press for the New Bulgarian University 2005 Seminar Series Publications, Southeast European Center for Semiotic Studies; ISBN 954-8964-65-1).
- Deely, John N.
2005a "Thomas Albert Sebeok (1920–2001)", in *The Dictionary of Modern American Philosophers* (Bristol, UK: Thoemmes Press), Vol. 4, 2183–2188.
Also on line, with "Biologist Manqué" added to title, at <<http://carbon.cudenver.edu/~mryder/itc/sebeok.html>>.

- Deely, John N.
2006 “Semiotics, History of”, in *Encyclopedia of Language and Linguistics, Second Edition* (London: Elsevier, 2006), Vol. 11, 216–229.
- Deely, John N.
2006a “The literal, the metaphorical, and the price of semiotics: an essay on philosophy of language and the doctrine of signs”, *Semiotica* 161–1/4 (2006), 9–74.
- Deely, John N.
2006b “On ‘Semiotics’ as Naming the Doctrine of Signs”, *Semiotica* 158.1/4 (2006), 1–33.
- Deely, John N.
2007 “The Primary Modeling System in Animals”, in *La Filosofia del Linguaggio come arte dell’ascolto: sulla ricerca scientifica di Augusto Ponzio* / *Philosophy of Language as the art of listening: on Augusto Ponzio’s scientific research*, ed. Susan Petrilli (Bari, Italy: Edizione dal Sud, 2007), 161–179.
- Deely, John N.
2008 *Descartes & Poincaré: the crossroad of signs and ideas* (Scranton, PA: University of Scranton Press).
- Deely, John N.
2009 *Augustine & Poincaré: the Protosemiotic Development* (Scranton, PA: University of Scranton Press).
- Deely, John N.
2009a *Purely Objective Reality* (Berlin: Mouton de Gruyter).
- Deely, John N.
2009b *Basics of Semiotics* (5th expanded ed.; = Tartu Semiotics Library 4.2; Tartu, Estonia: Tartu University Press).
- Deely, John N.
2009c “Aristotle’s Triangle and the Triadic Sign”, Prologue to *Semiotics 2008*, ed. John Deely and Leonard Sbrocchi (Proceedings of the 33rd Annual SSA Meeting held in Houston, Texas, October 16–19, 2008; Ottawa, Canada: Legas).
- Deely, John N.
2010 *Semiotic Animal* (South Bend, IN: St Augustine’s Press).
- Deely, John N.
2010a *Semiotics Seen Synchronically: The View from 2010* (Ottawa, Canada: Legas Publishing). Revised version of article “Semiotic Seen Synchronically: The View from 2010”, *Chinese Semiotic Studies*, vol. 4, no. 2 (December 2010), 9–113.
- Deely, John, Susan Petrilli, and Augusto Ponzio
2005 *The Semiotic Animal* (Ottawa: Legas Publishing).
- Deely, John N., Brooke Williams, and Felicia E. Kruse, Editors
1986 *Frontiers in Semiotics* (Bloomington: Indiana University Press). Preface on “Pars Pro Toto”, pp. viii–xvii; “Description of Contributions”, pp. xviii–xxii.

- Eco, Umberto, Roberto Lambertini, Costantino Marmo, and Andrea Tabarroni
 1986 “Latratuſ Canis or: The Dog’s Barking”, in Deely, Williams, and Kruse 1986: 63–73; ſee the editorial note on the provenance of this text, *ibid.* xix.
- Emmeche, Claus
 1994 *The Garden in the Machine* (Princeton, NJ: Princeton University Press).
- Headley, J. T.
 1846 *Napoleon and His Marshalls* (New York: Baker and Scribner).
- Hoffmeyer, Jesper
 1996 *Signs of Meaning in the Universe* (Bloomington, IN: Indiana University Press), trans. Barbara J. Haverland of *En Snelg På Vejen: Betydningens naturhistorie* (Copenhagen: Rosinante, 1993).
- Hoffmeyer, Jesper, and Claus Emmeche, Guest-Editors
 1999 “Biosemiotica”, *Semiotica* Special Issue 127.1/4.
- Krampen, Martin
 1981 “Phytosemiotics”, *Semiotica* 36.3/4, 187–209; ſubſtantially reprinted in Deely, Williams, and Kruse 1986: 83–95.
- Kull, Kalevi, Guest-Editor
 2001 Special Issue on Biosemiotics, *Semiotica* 134.1/4.
- Lotman, Juri (28 February 1922–1993 October 28)
 1974 “Primary and Secondary Communication-Modeling Systems”, in Lucid 1977: 95–98, being the translation of “O sootnoſenii pervičnogo i vtroičnogo v kommunikativno-modelirujuſčix ſistemax” in *Materialy vſesojuznogo ſimpoziuma po vtoričnym modelirujuſčim ſistemam* 1.5 (Tartu: Tartu University Press), 224–228.
- Lotman, Juri (28 February 1922–1993 October 28)
 1987 On the contemporary concept of text. *Livstegn: Tidsskrift for Norsk forening for semiotikk* (Proceedings of the first ſymposium “Semiotics in Theory and Practice”, 2–3 Oct. 1986, Bergen, Norway: Norwegian Association for Semiotic Studies) 3, 159–163 (trans. from Russian by Jostein Bortnes).
- Lotman, Juri (28 February 1922–1993 October 28)
 1990 *Universe of the Mind: A Semiotic Theory of Culture* (London: I. B. Taurus).
- Lucid, David, Editor and Translator
 1977 *Soviet Semiotics. An Anthology* (Baltimore, MD: The Johns Hopkins University Press).
- Manetti, Giovanni
 1993 *Theories of the Sign in Classical Antiquity* (Bloomington, IN: Indiana University Press), trans. by Christine Richardson of *Le teorie del segno nell’antichità classica* (Milan: Bompiani, 1987).
- Macdonell, A. G.
 1934 *Napoleon and His Marshalls* (New York: Macmillan).

- Nöth, Winfried, Organizer
 2001 German-Italian Colloquium “The Semiotic Threshold from Nature to Culture”, Kassell, Germany, 16–17 February at the Center for Cultural Studies, University of Kassel; papers published together with the Imatra 2000 Ecosemiotics colloquium in *The Semiotics of Nature*, a Special Issue of *Sign Systems Studies* 29.1, ed. Kalevi Kull and Winfried Nöth.
- Ogden, Charles K. and Ivor A. Richards
 1923 *The Meaning of Meaning. A Study of the Influence of Language upon Thought and of the Science of Symbolism* (New York: Harcourt, Brace).
- Pearson, Charls, and Hamilton-Faria, Hope, Editors
 1977 A private volume derivative from the First Annual Meeting of the Semiotic Society of America (SSA) held 24–25 September 1976 in Atlanta, Georgia. Though it bears the title *Proceedings of the Semiotic Society of America Volume 1, 1976* (Atlanta, GA: printed by the Printing and Photographic Center, Georgia Institute of Technology), the volume had no official standing or authorization whatever from the SSA Executive Director or Board; official SSA Proceedings volumes did not begin until the 5th Annual Meeting, entitled *Semiotics 1980*, and each official volume thereafter is entitled in that manner.
- Peirce, Charles Sanders
Note. The designation CP abbreviates *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP (which covers the period in Peirce’s life i.1866–1913) is based principally on the Burks Bibliography at the end of CP 8 (see entry above for Burks 1958). The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Peirce, Charles Sanders
 1903 “The Ethics of Terminology”, from *A Syllabus of Certain Topics of Logic* (Boston: Alfred Mudge & Son), 10–14; reprinted in CP 2.219–2.226 continuing 1.202.
- Peirce, Charles Sanders
 1906 CP 5.448n1, being a later portion of the 1905 “Basis of Pragmatism” ms.
- Petrilli, Susan, and Augusto Ponzio
 2001 *Thomas Sebeok and the Signs of Life* (Cambridge, UK: Icon Books).

- Poinsot, John
1632 *Tractatus de Signis*, subtitled *The Semiotic of John Poinsot*, extracted from the *Artis Logicae Prima et Secunda Pars* of 1631–1632 and arranged in bilingual format by John Deely in consultation with Ralph A. Powell (Berkeley: University of California Press, 1985).
- Robey, David
1989 “Introduction” to Umberto Eco, *The Open Work*, trans. Anna Cancogni (Cambridge, MA: Harvard University Press), vii–xxxii.
- Saussure, Ferdinand de
1916 *Cours de Linguistique Générale* (Paris: Payot, 1916). Lectures delivered at the University of Geneva i.1906–1911 and posthumously published from auditors’ notes by Charles Bally and Albert Sechehaye with the collaboration of Albert Riedlinger.
Four subsequent Payot editions were published (1922, 1931, 1949, 1955), the second of which was slightly revised and has become the basis of the “standard pagination” incorporated, for example, into the Harris translation mentioned later in this gloss. Two critical editions have been prepared, one by Tullio de Mauro (Paris: Payot, 1972) and one by R. Engler (publishing in full the lecture notes taken by Saussure’s pupils on which the original Payot edition was based; Wiesbaden: Otto Harrassowitz, 1967–1974). My main reference has been to the de Mauro edition.
The work has been translated into English twice under the same title, *Course in General Linguistics*, first by Wade Baskin (New York: McGraw-Hill, 1959), the second time by Roy Harris (London: Duckworth, 1983). The Harris translation is based on the Payot editions but provides a fuller index and corrects printers’ errors repeated in the series of Payot editions; yet the Baskin translation is perhaps superior as an English text.
- Sebeok, Thomas Albert
1963 “Book review article of M. Lindauer, *Communication among Social Bees*; W. N. Kellog, *Porpoises and Sonar*; and J. C. Lilly, *Man and Dolphin*”, *Language* 39: 448–66.
- Sebeok, Thomas Albert
1976 *Contributions to the Doctrine of Signs* (Indiana University, Bloomington, and The Peter De Ridder Press, Lisse).
- Sebeok, Thomas Albert
1984 “Vital Signs”, Presidential Address delivered October 12 to the ninth Annual Meeting of the Semiotic Society of America, Bloomington, Indiana, October 11–14; subsequently printed in *The American Journal of Semiotics* 3.3, 1–27, and reprinted in Sebeok 1986: 59–79.

- Sebeok, Thomas Albert
 1984a "The Evolution of Communication and the Origin of Language", lecture of June 3 in the June 1–3 ISISSS '84 Colloquium on "Phylogeny and Ontogeny of Communication Systems". Published under the title "Communication, Language, and Speech. Evolutionary Considerations", in Sebeok 1986: 10–16.
- Sebeok, Thomas Albert
 1984b "Symptom", Chapter 10 of *New Directions in Linguistics and Semiotics*, ed. James E. Copeland (Houston: Rice University Studies), 212–30.
- Sebeok, Thomas Albert
 1987 "Language: How Primary a Modeling System?", in *Semiotics 1987*, ed. John Deely (Lanham, MD: University Press of America, 1988), 15–27.
- Sebeok, Thomas Albert
 1991 *Semiotics in the United States* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas Albert
 1992 "Into the Rose-Garden", *Ural-Altäische Jahrbücher* 64, 1–12.
- Sebeok, Thomas Albert
 1996 "Galen in Medical Semiotics", *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis* (Spring) 1.1: 89–111.
- Sebeok, Thomas Albert
 2001 *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
 1977 *A Perfusion of Signs. Transactions of the First North American Semiotics Colloquium* (Bloomington, IN: Indiana University Press, 1986), 180–206.
- Sebeok, Thomas A., Hayes, Alfred S., and Bateson, Mary Catherine, eds.
 1964 *Approaches to Semiotics*. Transactions of the 1962 Indiana University Conference on Paralinguistics and Kinesics (1972 second printing; The Hague: Mouton).
- Sebeok, Thomas A., and Robert Rosenthal, Editors and Conference Chairmen
 1981 *The Clever Hans Phenomenon: Communication with Horses, Whales, Apes, and People* (=Annals of the New York Academy of Sciences, Volume 364; New York: The New York Academy of Sciences). Papers presented at the 6–7 May 1980 Conference on the Clever Hans Phenomenon. An entertaining account of this conference can be found in *The New Yorker's* "Talk of the Town" for May 26, 1980.
- Sebeok, Thomas A., and Umiker-Sebeok, Jean, ed.
 1980 *Speaking of Apes. A Critical Anthology of Two-Way Communication with Man* (New York: Plenum). This anthology is a landmark in the study of man-animal communication, bringing to bear, as it does, a state of the art critical consciousness that

- has so far been conspicuously lacking in this area of research. Further under Umiker-Sebeok.
- Stjernfelt, Frederik, and John Deely
2006 Review of John Deely's *Four Ages of Understanding* (2001) by Frederik Stjernfelt, "Let us not get too far ahead of the story . . . : A history of realist semiotics?", *Cybernetics & Human Knowing* 13.1 (2006), 86–103; the reply to which by John Deely, "Let us not lose sight of the forest for the trees . . .", *Cybernetics & Human Knowing* 13.3–4 (2006), 161–193, spells out in detail why the notion of "pansemiotics" is best regarded as both unnecessary and untenable.
- Tarasti, Eero, Richard Littlefield, Johanna Inkinen, and Maija Rossi, Editors
2000 *Commentationes in Honorem Thomas A. Sebeok Octogenarii A.D. MM Editae*, (Imatra, Finland: International Semiotics Institute Cultural Centre, 2000).
- Tasca, Norma, Editor
1995 *Ensaio em Homagem a Thomas A. Sebeok*, quadruple Special Issue of *Cruzeiro Semiótico*, ed. Norma Tasca (Porto, Portugal: Fundação Eng. António de Almeida).
- Umiker-Sebeok, Jean, and Sebeok, Thomas A.
(The four articles comprising this entry constitute a single, jointly produced, ongoing critique, substantially expanded and continually updated in each stage or version, that probably marks a turning point in the discussion of animal "language." The order of the names in this particular case does not uniformly represent priority of authorship for the component entries, as this seems to have shifted, e.g., between the 1980 and 1981b versions.)
1979 "Performing Animals: Secrets of the Trade," *Psychology Today*, 13,6: 78–91.
- Umiker-Sebeok, Jean, and Sebeok, Thomas A.
1980 "Questioning Apes," in *Speaking of Apes*, ed. Thomas A. Sebeok and Jean Umiker-Sebeok (New York: Plenum), 1–59.
- Umiker-Sebeok, Jean, and Sebeok, Thomas A.
1981a "Clever Hans and Smart Simians: The Self-Fulfilling Prophecy and Kindred Methodological Pitfalls," *Anthropos* 76, 1–2: 89–165.
- Umiker-Sebeok, Jean, and Sebeok, Thomas A.
1981b "Smart Simians: The Self-Fulfilling Prophecy and Kindred Methodological Pitfalls," in *The Play of Musement*, by Thomas A. Sebeok (Bloomington: Indiana University Press), 134–209.

Chapter 8

Traduttore traditore?

Dinda L. Gorlée

Epitaph¹

Ἄνδρα μοι ἔννεπε, Μοῦσα, πολύτροπον . . .
Speak, Muse, of the man of many turnings . . .
(Homer, *Odyssey*)

If asked what I would bring to a desert island, I would have to answer the works of Thomas Sebeok, but also the writings by Peirce, Jakobson or, as always, the Bible. Both the *pars pro toto* (the part for the whole) testimony and the *totum pro parte* (the whole for the part) definition follow the ideal or idealized “masters” which, as Sebeok argued in his introduction to *The Sign & Its Masters* (referring of course to other masters), are “double agents . . ., whether of stellar or of satellite rank, upon whose writings mine are but marginal notes” (1979: xiii). Sebeok is clearly my “own precursor by modifying each of the reader’s conceptions of the past” (Sebeok 1985: 657). He possessed the complex nature of a “second-hand” symbol (or better Symbol) I needed as Peirce’s “quasi-utterer/quasi-interpreter – in short you and me” (Sebeok 1979: xiii). The intertextuality makes me a modest epigone or epiphyte. To diffuse the focus of ambivalent tastes in scholarship, scholars desperately need one Symbol to continue the “immediate” experiences and find their own way. My own way is derivative but at the same time novel in the re-shaped – “translated” in my terminology – arrangements of earlier sources, responsibilities, and their enlightenment.

-
1. The prefix, *epi-*, an English loan word taken from Greek, has different translations, such as “at”, “upon”, “close upon”, “towards” and “against”. In the sections about “epitaph”, “episodes”, “epiphany” and equally other epiprefixes used here – Sebeok himself used the phrase “epitomized in the epigraph” (1979: 258) – the common sense of *epi-* suggests a “unifying” or “intensifier” mark or sign referring to a more intense or striking kind of sign (in contrast to non-sign), as Sebeok’s unifying and intensive sign exchange (Sebeok 1976, 1984, 1985a, and other publications) has taught (following Deely’s [1995] bibliography of Sebeok’s publications from 1942–1995).

Considering the finite existence of all Symbols, revealed here in this collection where we attempt to organize the past impressions, images and concepts of Tom Sebeok in our way, Sebeok's energetic image belongs to both reality and metaphor, but its intensity teaches us the fatalistic words of the Preacher who in his biblical day sought after the relative quality of truth (vs. non-truth). He advised his followers about the risks of reading books, articles, speeches, reviews, etc., and made ironic comments such as "of making many books there is no end; and much study is a weariness of the flesh" (Eccles. 12: 12).² This scriptural phrase summarizes the epigram saying "sharp nails driven deep home, these wise words . . . echoing one's shepherd's voice" (Eccles. 12: 11). The formidable task of reading and re-reading the vast and extensive series of Sebeok's epigraphy was for the epigones – including "some obscure student like myself" (CP: 5.59) – some enjoyable kind of "sign-burden" (CP: 5.467), spending real and precious time and energy to become integrated into the study of communication and signification.³ A kind of spiritual awakening from a reductive fallacy, where the Symbol took on a kind of semiotic radiance.

As an advanced student I frequented the library of University of Groningen and hoped that my constant readings would satisfy my desire for new things. By pure "chance" I read Sebeok's *Style in Language* (1960).⁴ The bemusement with this new world of humanities led me away

-
2. Used is my "favorite" Holy Bible, the Knox Translation (1956, 2nd ed.). Ecclesiastes is a controversial and mysterious book of the Hebrew Bible, disagreeing on the question of which sources are genuinely authentic or not. The dark sayings about the human suffering and the fate of the soul after death seem to reproduce the religious and non-religious beliefs of Greek sceptics written during Hellenistic times established in the third century A.D. – an "exile" translation at the beginning of Christianity written in Aramaic with a strong influence of Greek.
 3. The weblike fabric of seamless information in Sebeok's books – data, dates, details, names, years and other telltale marks – is often not available to the reader in subject indexes, a handy tool for the reader. Sebeok's own books carry elaborate bibliographic references and names indexes, but often lack a subject index to help the readership to get along. In the "wilderness" of pages, the "lazy" reader wanders around following Sebeok's winding or intricate streams of consciousness in order to become "active" and form his or her own tougher opinion.
 4. Sebeok's early collections *Myth. A Symposium* (1958) and *Style in Language* (1960) continue to be volumes of innovative and speculative articles, which deserve to be better known than they appear to be.

from the traditional and undemanding schooling of Spanish linguistics and stylistics old style, to make the first overture to interdisciplinary (or better, transdisciplinary) translation studies. Translation studies began in seriousness after World War II and the professional interpreting at the international tribunal in Nuremberg and initially were theoretically based on Bible translation (Nida's classic [1964]) used in literary genres (Steiner 1975). I was interested in automatic translation, then a "trendy" subject (later a misconception since it started from words that were translated item-for-item). I read the articles in Brower (1959), including Oettinger's article about translation machines, Jakobson's famous essay "On Linguistic Aspects of Translation", Nida on Bible translation and Quine on meaning and translation. Yet I found no general linguist to direct me further into translation studies. Not risking a misinterpretation to fit the famous epigram *traduttore traditore!* (translator, traitor!) (Jakobson 1959: 238), I was forced into an autodidactic stance in self-imposed isolation, yet one which led me to teach both theory of translation and semiotics, and found in both disciplines the semiotic varieties of translation – later christened as semio-translation.⁵

In the course of a rainy but intellectually wonderful World Congress of the International Association for Semiotic Studies in Vienna (1979), "my thought took a fresh turn" (Eccl. 9: 11). I renounced all other methods of thinking of which I was aware, and followed Sebeok's personal call to semiotics. His pioneering voice, in unison with other semiotic voices – I took part in Wilss's revolutionary *Arbeitsgruppe* about semiotic approaches to translation (see Wilss 1980 for proceedings) – dramatically summoned me into the unexplored intertextuality of the semiotic approaches to linguistic instability and translational diversity. In those

5. My term "semio-translation" announced in Gorlée 1994: 226–232, further developed in Gorlée 2003, 2004: *passim*) is a Peirce-oriented use of interpretation applied particularly to translation. Semio-translation continued the semiotic contributions of Holmes, who translated Czech translation critics (Miko, Popovič, Radó, Babler, and others) into English so they became "known" in the Western hemisphere (Holmes [ed.] 1970). Encouraged by Bertil Malmberg in 1985 to keep up my project of the semiotics of translation, I got to know Wilss (1980), who introduced semiotics within translation studies, and befriended Koller, whose linguistic concerns took him a long time to accept semiotics as a methodology in translation studies, and Toury, author on the article of semiotic translation (1986) in Sebeok's *Encyclopedic Dictionary of Semiotics*, and other translation-theoreticians.

“archaic” days this academic invitation into an unknown but exciting territory was almost an alarm call to me, in my quality as a junior academician. The bold experiment did require some strength and courage in the face of the academic mainstream of linguistics, where Chomsky’s ideas were prominent and “scholarly expressions of phenomena were truly cries in the wilderness” and considered “messy” or “nondiscrete” (Regan in Sebeok, Lamb and Regan 1988: 5). Yet the semiotic calling responded to my deepest intuitions to build up my interdisciplinary and cultural configurations of scholarship (see the beautiful explanation of Gunn 1992) and so I followed it.

After moving abroad to Norway, I became a solitary foreigner stranded among the snowy fjords. I concentrated on the semiotic approaches to translation and became deeply clustered in Peirce’s monumental oeuvre, away from the generative linguistics then fashionable. I continued Jakobson’s three types of translation – intralingual, interlingual, and intersemiotic translation (1959). Sebeok, Jakobson’s “first American student” (Sebeok 1979: 226) and regarded as an intellectual pioneer of the so-called “messiness” of semiotics (Regan in Sebeok, Lam and Regan 1988: 5),⁶ encouraged my semiotic progress – including the founding in collaboration with my colleague and friend Sven Storelv, of the *Norsk forening for semiotikk* (Norwegian Association of Semiotics) in 1985, later the Nordic Association for Semiotics, and the journal *Livstegn* (in English “Signs of life”) (1986–1992).⁷

Invited to the first congress of the Norwegian Association of Semiotic Studies (1986), Sebeok wrote in the guestbook the remark “‘Vital Sign’ with affectionate regards 10/3/86” to celebrate his politically adventurous

6. The kind of connectionism of semiotics was personally healed by Sebeok’s “efficient and ordered thinking [and] scrupulously clear definitions” (Regan in Sebeok, Lam, and Regan 1988: 5). Sebeok’s semiotics has been built up as a multidisciplinary discipline. He “has given considerable energy to dismantling pseudo-arguments, and his efforts and methods, phrased in his crystal clear prose, are legendary” so that “semiotics may encompass the whole sphere of human knowledge, and we find that linguistics may help to bring us back from the fragmentation of knowledge that has been characteristic of universities during the last hundred years or more into an integration of all the fields of knowledge, with the notion of networks of relationships as the unifying principle” (Regan in Sebeok, Lam, and Regan 1988: 5, 6).

7. For title *Livstegn* see Sebeok 1984a trans. into Norwegian in Sebeok (1986).

reunion with Lotman were during his first visit to the West.⁸ Sebeok and Lotman “addressing one another mostly in German, with snatches of French, interspersed by his shaky English and my faltering Russian” as old semiotic friends (Sebeok 2001: 167). Despite the epigram *traduttore, traditore!*, translation tends to work satisfactorily for globalized semioticians!⁹

Translating and translation (process and product) seem to start from the original, romantic unity of the ego breathing his or her individual translational fashion, through the duality of contrastive terms of signifier and signified (signans and signatum), until the revolutionary advance of the plurality of the translators’ spirit, for which it is fitting to coin new terminology (such as representamen, interpretant, quasi-interpreter and ground). This three-way metaphor also functions reversely, creating unity in target text(s) from a chaotic reaction within outside source text(s). Is a metaphorical genesis of human translation relevant to machine (or machine-aided) translation? And is this and other mechanisms of translation dependent on genres or topics of source- and target-texts, as well as on shifts in the nature of time- and place-dependent texts? Or are they dependent on different languages – dialects, sociolects, idiolects, slangs and creolization, hybridization of languages, including the language-event of glossolalia? Is translation a biosemiotic fable to understand the development of the translational process? Or, finally, are they dependent on the reliance of translators on different tools, instruction, or kinds of strategy? Those questions about knowledge were asked in semiotic terms.

Echoing Ecclesiastes, was this “work under the sun frustration and labour lost”? This paragraph showed healthy skepticism but also signalled a growth of knowledge. Semio-translation provided my necessary inspiration, an indication that the “vanity” is sometimes removed to give way to

8. For “Semiotics in theory and practice” (2–3 October 1986) see *Livstegn 2* (September 1986). For proceedings see *Livstegn 3* (January 1987) including introductions to the events by Sebeok (1987), as well as Sebeok’s article translated into Norwegian (1987a, trans. from 1984a) and Lotman translated into English (1987), among other articles. See also Sebeok (1988a, 2001).

9. If we follow Jakobson’s argument, translation (that is, preserving meaning) is an impossible task: “If we were to translate into English the traditional formula *Traduttore, traditore* as ‘the translator is a betrayer,’ we would deprive the Italian rhyming epigram of all its paronomastic value. Hence a cognitive attitude would compel us to change this aporism into a more explicit statement and to answer the questions: translator of what messages? Betrayer of what values?” (Jakobson 1959: 238).

newness.¹⁰ Remembering Tom Sebeok as my long teacher and friend, he was an absolute genius with abundant talents in all fields I enjoyed. His own prophetic utterances, dated 1988, where he expressed his confidence in the vitally important discipline, biosemiotics, now applied in many other fields (Sebeok in Denny 1988: 1):¹¹

A human being might eventually become part of a unit, most of which is mechanical. We already have artificial organs and limbs. As technology improves, the artificial replacements will multiply and the living parts will diminish. The day may come when the living becomes nothing more than an appendage to the non-living.

How can we continue in scholarship without listening to and reading Sebeok's cogent interpretations of linguistic, biological, and other issues, events, or characters in Peircean, Jakobsonian, and even his own semiotics, without his authoritative opinions about the origins of changes, exchanges and interchanges in linguistics and the science of culture and acculturation (see, e.g., Preface in Sebeok 1986a: ix–xiii), without his concerns as futurist and trend spotter (in Sebeok's review in Denny [1988]), and without other imaginative extravaganzas, such as opera (hearing and looking not singing)? The “brainstorming” with Sebeok put me constantly on new paths, studying general semiotics on degeneracy in Peirce's work in “his” *Semiotica* (Gorlée 1987, 1990, later 2002, 2005, 2005a, 2007, 2008, 2010), applied to the semiotic approach to translation.¹²

-
10. Nida stated that “[t]he initial expressions of Ecclesiastes: ‘Vanity of vanity, all is vanity’ is more Latin than modern English, and so other translators have employed ‘Life is useless, all useless,’ (Today's English Version) or ‘Nothing makes sense! Everything is nonsense,’ (Contemporary English Version) or ‘Nothing is worthwhile, everything is futile,’ (Living Bible)” (2003: 85) (Eco 2003: 97).
 11. Including the new branch of biotranslation (Kull and Torop 2003) based on von Uexküll.
 12. Semio-translation is applied in vocal translation and legal translation. Vocal translation – inspired by Sebeok's early essays on bird song (1981, 1985a: 298) and his analysis of charms, dreams portents and prayers in Cheremis art (assembled in Sebeok 1974) – is a new branch in translation studies, dealing with the art of translating the libretto of operas, hymns, art song, folksong, etc. transplanted into a new language, yet with unchanged music (Gorlée 1996, 1997, 2002, 2005, 2005a, 2008). My article on vocal translation submitted to *Semiotica* (2002) was welcomed by Sebeok, and without knowing it was also his farewell. The article ‘Grieg's Swan Songs’ (2002: 153) and also my book *On Translating Signs* (2004: cover page) are dedicated to Sebeok's memory. For legal translation based on Peirce (Gorlée 1999, 2005b).

Coleridge's rhetorical question (or commanding desire) taken from his *The Statesman's Manual* was: "Or would you wish for authorities? – for great examples?" ([1816]1866: 320).¹³ *The Statesman's Manual; or the Bible the Best Guide to Political Skill and Foresight: A Lay-Sermon, Addressed to the Higher Classes of Society* was, in 1816, a period piece of humanities and philosophy, but yesterday and today it is answered by the spiritual (not geographical) nearness of Sebeok's theoretical and pragmatic genius. Genius has contradictory meanings, but the criteria of mastery include authority, greatness, and charisma in order to reach wisdom (Bloom 2002: 1ff.).¹⁴ Coleridge did in his day speculate on the greatness and strategy of Heraclitus, Augustus, and Berkeley, "whose works have been in all ages deemed the models of good sense, and are still the pocket companions of those who pride themselves on uniting the scholar with the gentleman" ([1816]1866: 320). Coleridge appeared to update this archaic reference for future generations: "This accomplished man of the world has given an account of the subjects of conversation between the illustrious statesmen who governed, and the brightest luminaries who then adorned, the empire of the civilized world" ([1816]1866: 320). Sebeok's discovery has turned the "civilized world" of the 20th Century, into his own world: the multiscientific exploration of semiotics seen as a worldwide movement. The exploration of the unknown was perfectly embodied by Sebeok, our foremost spokesman and authoritative voice for strict and creative scholarship now and in the future. As "spokeman" – like the Hebrew word *koleleth* it renders – Sebeok convoked, assembled, and spoke to the "assembly" of semiotic studies. Coleridge stated that "without a habitual interest in [semiotics] a man may be a dexterous intriguer, but never be a statesman" ([1816]1866: 321).¹⁵ The role of Sebeok, as semiotic (or better, semiosic) "statesman", in fact thwarted all reason,

13. Coleridge seemed in his interdisciplinary learning the romantic "forerunner" to Peirce, despite their differences from literature to logic. Peirce quoted Coleridge in CP: 7.54, CTN: 2: 24, CTN: 3: 170, 217, and MS 283 (see TEP 1998: 372, and reference by editors (Peirce Edition Project) 543 note 5).

14. In 1883–1886, Peirce listed "Materials for an Impressionist List of 300 Men", later specified as "Men of Feeling, Action, Thought" (W: 5: 26–106). Firstly, he "classified" Coleridge as "doubtful" (W: 5: 27). In later "rankings" with revised "Questionnaire for the Study of Great Men" (with alas just a few examples of women) according to inward and outward properties and ideas (family, childhood, youth, physique, ageing, environment, work, greatness, and character) other names make their way, while Coleridge does not.

15. These passages are verbally "misconstructed" to reveal the "symbolic" value in the semiotic life of Sebeok.

design, and accident to generously and almost intimately carry the gift of sign theory to the world and its interested scholars.

Sebeok's spiritually nomadic life can be characterized as a Shakespearean "glassy essence" (see the epigram in the following section) but meant as cited by Peirce as man as a symbol (CP: 7.580ff.) as the topic of scholarly discussions (see Sebeok 1969: 61–62). A Symbol provided "with the systematic ambiguity of such concepts as *identity* and *self-identity*' (Singer 1984: 2). Under the historical or fictive surface meaning of the vital force of Sebeok's life, another story is discernible as the true intent of his characters and incidents. In the narrative of this "allegory", let me find the direct exposition and indirect exposure of his vices and follies as I experienced them in our meetings during conferences and other seminars, and share some personal episodes of the story he told me. As Coleridge stated in *The Statesman's Manual* ([1816]1866: 322):

Now an allegory is but a translation of abstract motions into a picture-language, which is itself nothing but an abstraction from objects to the senses. . . . On the other hand a symbol . . . is characterized by a translucence of the special in the individual, or of the general of the special, or of the universal in the general; above all by the translucence of the eternal through and in the temporal. It always partakes of the reality which it renders intelligible; and while it enunciates the whole, abides by itself as a living part in that unity of which it is the representative. [Allegories] are but empty echoes which the fancy arbitrarily associates with apparitions of matter. . . .

In *The Statesman's Manual*, Coleridge described in his day an allegory as the translating (or "translating") of a nonpoetic structure of abstract ideas into poetic imagery. This episodic art-form of translation follows Sebeok's vocal and written words and is illustrated by images of numberless events, cherished by me. It represents of course no product of pseudo-poetic fine arts nor Machiavellian regulations and protocols, as Coleridge would probably mean, but this essay is an excursion into my insight of Thomas Sebeok as Coleridgian "living Power and prime Agent".

Far from a collective epideixis or epimyth reflecting Sebeok as myth-maker, (Sebeok 1958), this essay is a personal (and not neutral) portrait of his proverbial power as "midwife" (Deely 1978: 152, see Sebeok 1979: vii) bringing forth modern semiotics. Sebeok's story, as told by me, is a modest "parody" of the style of his article about the lifework of von Uexküll, Jakobson, and other "masters" in part two of *The Sign and its Masters* (1997: 183–261). The story is laced with autobiographical observations and rests on some archival work of "figures, citations from favorite poets, apophthegms, anecdotes, witty turns of phrase, antithesis,

[and] apostrophe” (Shipley 1972: 98). This narrative story is meant to celebrate Sebeok’s constant efforts of spreading, meaning, imprinting, storing, recalling, and combining persons, events, and writings within semiotics to constantly publish new findings under his aegis.

In order to resolve and decipher the semiotic riddle of warning symbols for aliens, Sebeok, “[t]he wise man, there is none like him” (Eccl. 7: 31) seemed to invite some semiotic epigones into his so-called “atomic priesthood” (Sebeok 1984: 24, discussed in Eco 1997: 176–177). Characterized as a secret confraternity (and consorority) of physical, anthropological, nuclear engineering, linguistic and psychological semioticians, this “priesthood” was about isolating the radioactive (hazardous) waste disposal for future generations as a modern transposition of “the burial sites (pyramids) of the Egyptian Pharaohs . . . which did not deter greedy grave-robbers from digging for ‘hidden treasures’” (Sebeok 1984: 24). This iconographical question (blended of course with indicative and symbolic values) was treated in Sebeok’s semiotic survey for the technical report for the U.S. Department of Energy (Office of Nuclear Waste Isolation). His “atomic priesthood” guarded and perpetuated the images of the “renewed” Rosetta Stone, the “corporate identity” of the deep burial (at a depth of hundreds of meters) of nuclear waste in the U.S. desert. Sometimes this “atomic priesthood” – reflecting the voices of the Greek chorus mediating between scene and spectators, semioticians and non-semioticians – happened to be taken as a general term and despite this error did bring Sebeok some popularity as generalized myth- and legend-maker of semiotics – all thanks to the false trail of Peirce’s fallibility.

Sebeok’s know-how in the signs of semiotic times was not only distinguished but rather an eccentric and discomfoting comfort. His wisdom was irony, namely picaresque understatement modulated into sympathy. His affectionate exhortations – his irony of love – seem to resonate with something inside of you: the heart.

Episodes

. . . But man, proud man,
Dressed in a little brief authority,
Most ignorant of what he’s most assured,
His glassy essence, like an angry ape
Plays such fantastic tricks before high heaven
As makes the angels weep, who, with our spleens,
Would all themselves laugh mortal.
(Shakespeare, *Measure for Measure*)

Translation is originally a chaos unsettled through knowledge and skill, from anarchic disorder translation imposes a growing harmony. In the attempt to create and re-create the artistic – and maybe estranged – acts of semio-translation, the semiotic structures of translation were built *ex nihilo* as a form of “exile”, meaning the replication and reproduction of foreign and transgressive forms of linguistic use. An exotic language is by being translated familiarized into the new target language and has finally, through replicating words and acts, been domesticated and become close to the native tongue. For Sebeok, “man is nature’s interpreter” (CP: 7.53, following Peirce and Coleridge’s argument on genius) and he himself was a great storyteller, portraying the adventures of translation in his mercurial life.

Sebeok has told the story himself, episodically (rephrased in Baer 1987: 181ff. and elsewhere). He became an emigré, fleeing from Budapest for the United States when he was a teenager. After his arrival he, as international student, immediately learnt the foreign English language until achieving fluent perfection. His own epigraphy was originally inscribed as foreign translation but his language was not alien or homeless, since English became for Sebeok wholly familiar. His intimate translation into the English language was interpreted by the love he felt for the language. The discussions with foreign colleagues and friends, the attempt to (re)trace his Hungarian family and friends, his military services spent on European soil during II World War, the journeys to discover the language and culture of the Cheremis people spoken in the Soviet Union, his near-annual travels to Finland, and the gigantic variety of his travels, lectures, contributions, and publications worldwide and outside his home country, together with planning and organizing all his foreign contacts and journeys brought the epigenetics of translation near to his heart.

Sebeok was a multilingual scholar speaking different languages at conferences and elsewhere: apart from the unifying linguistic device, English, he spoke his native Hungarian, as well as Finnish, Uralic, Cheremis, French, German, and perhaps even some Italian, and other languages of which I was unaware. The exposure to knowledge and readings was expressed in the linguistic way of multilingual polyglossia. He echoed the ideal of global recognition for others who leave their history, their roots, their known identity and must create and recreate themselves in another culture – personifying the heart rather than the head of translation, embodying this alien-and-foreign receptiveness and sensitivity. He echoed *traduttore, e non traditore*, with a changed formula for Sebeok’s special situation, to show that the slight or radical differences in the ability of

language can magically express new meaning and information (Nida 1959: 30):

... “heart” in Greek must often be rendered by “liver”, as in the Kabba-Laka language of French Equatorial Africa, by “abdomen”, as in Conob, a Mayan language of Guatemala, and by “throat”, as in some contexts in Marshallese, a language of the South Pacific. In languages in which “gall” stands for wisdom and a “hard heart” is a symbol of courage, the Bible translator is obliged to make certain adaptations or cause serious misunderstandings.

A translator becomes a full participant in the target culture, not a mere observer (Wheelwright 1958: 159). The sign-“burden” of the now endangered language and culture of the Sioux (Sebeok 1947, Chafe 1973: 1178–1181), also known as Dakota (meaning in Sioux “friends” or “allies”), meant in their prophecies that “heart” meant for the Indians the one true “eye of the heart” (“*chante ishta*”) sharing the same breath as our ancestors. “Heart” meant sharing eye-to-eye and heart-to-heart communication in search of their reality, including their sacred peace pipe, buffalo and deer hunting, sundancing, and other rituals to give them strength (according to Black Elk interviewed in 1932, see Neihardt 1961: *passim*, esp. 2–6, 95–99). The duties of the translator is what Lévi-Strauss’s (1962) meant with his epitome of “*pensée sauvage*” (English “savage thought”) about treating Peircean sign-words, sign-events, and sign-phenomena in two or more languages and cultures kindly, realistically, and morally.¹⁶

16. The semantic union functions both in (written) translation and (vocal) interpreting. The former is Nida’s example and the latter could, for instance, be indicated by the Sioux Chief Standing Bear’s explanation for the multiple yet unified significance of the peace pipe (“*calumet*”) for the Native American peoples: ‘The pipe was a tangible, visible link that joined man to Wakan Tanka and every puff of smoke that ascended in prayer unfailingly reached His presence. With it faith was upheld, ceremony sanctified, and the being consecrated. All the meanings of moral duty, ethics, religious and spiritual conceptions were symbolized in the pipe. It signified brotherhood, peace, and the perfection of Wakan Tanka, and to the Lakota [Dakota?] the pipe stood for that which the Bible, Church, State, and Flag, all combined, represented in the mind of the white man’ (Chief Standing Bear quoted in Wheelwright 1958: 159, 168 note 8, article in Sebeok [ed.] *Myth. A Symposium* [1958]). As semioticians, the Sioux worked out a system of signaling with mirrors. In contrast to the Sapir-Whorf hypothesis, which made translation an impossible activity, Sapir and Whorf’s work on Native American languages “translated”

Within the blending of target-source semio-linguistic relativity in the “heart” and mind, a sign in any language signifies and survives in the bilingual brains of the speakers (including the translators as special speakers), because it has some iconic quality or another distinctive property or general attribute which converts it into a special sign for somebody in the source and target languages. A sign such as the term “heart”, a settled word in English (source) language, must be puzzling, interesting or otherwise require a speaker’s (and translator’s) attention. The sign-term suggests that it means something other than itself, requiring new information in the target language and culture, such as the unusual or contextually special variants of indicating the heart as “liver”, “throat”, “eye” or otherwise, which are determinate – “good”, “bad”, or “somewhere-in-between” – translations of the primary sign, and may be acceptable or not.

Sebeok hardly needed interpreters, he did his own code switching and language mixing. However, he did need some translators, *traduttore traditore* or not. He trusted some translators, such as Susan Petrilli and other translators including my humble self. In Sebeok’s “Spanish period” (around 1990) during which he travelled frequently to Spain and Latin America and his works were translated into Spanish, he asked me to check and revise some drafts of translations and was, somehow, unconcerned with some misunderstandings. The *faux pas* were seemingly forgiven by Sebeok, following the Peircean virtues and vices of “good” and “bad” interpretants. Translation involves his pre-existent text-sign – Sebeok’s own original article in English language – which is not retained but produces a potentially infinite network of translated Spanish interpretant-signs. These perfect, imperfect, and intermediate replicas are all reproductive tokens which, in the long run, will grow toward reasonableness and are destined to converge into general signs to assure our survival (CP: 2.246, CP: 3.363). Sebeok concluded that “To be a sign and to be a replicator – this is ultimately a statement of identity” (1979: xiii). In his

the Hopi’s vocal form of interpreting. Sebeok developed Jakobson’s intersemiotic translation (1959) to his article “Aboriginal Sign ‘Language’” to explain the significative gestures of hand and arm of Plain Sign Language (1979: 128–167, see three conclusions concerning future multimedia considerations on the last page). The Plain Indians were an amalgamation of different subtribes and their pantomimic Plain Sign Language made their (inter)tribal communication possible. The sign language “perfected” other blueprints, such as the use of signals of smoke, fire, or signals made by waving blankets.

vital sign of magically reflecting the future, he saw that the solipsism of the individual translator takes part of “the entire universe . . . [which] is perfused with signs, if it is not composed exclusively of signs” (CP: 5.448 note 1, including Peirce’s wonderful story about the misinterpretation and translation of the vague conversation of two Englishmen traveling by train outside their native England).¹⁷

On the topic of translation, Sebeok himself narrated his own story about the translation of Lacan’s psychoanalysis, which he abhorred. Sebeok wrote the eloquent words: “Psychoanalysis is dying at its cocaine-dusted roots, so attempts to replant this mystical fabrication in our midst amount to mere desperate diablerie” (Sebeok 1991: 125). To respond with an ironical tone, almost jokingly, Sebeok quoted a quotation of a quotation, “repeating what Robert Frost told Lincoln MacVeagh about Carl Sandburg” and then sarcastically replanting (that means: replacing and replaying) the question about the translation of Lacan’s writings. Sebeok stated that “he [Lacan] was the kind of writer who had everything to gain and nothing to lose by being translated into a different language” (1991: 125).

Both translation and its metaphors mediate between the original and the likeness. Translation itself and its metaphors are a species of hypoi-conic analogies – that is, thematic variants, even parodies, existing for the specific purpose of representing something else as part of the context of a new target culture. Translation, an intensive form taken from Latin *transfere*, means a metaphor, that of “carrying something over” from one time and place to another. The word metaphor, borrowed from Greek *μετα-* (across) until *μεταφέρειν* (to bear, carry), is a direct replica of

17. Sebeok stated : “I am a solipsist and proud of it” (Sebeok, Lamb and Regan 1988: 12) followed by Lamb’s skeptical response: “Well, that’s great. But does he really mean that?” (Sebeok, Lamb and Regan 1988: 18–19). The solipsist must necessarily adjust to *Umwelten* outside himself (or herself), taking account of the structural variance and invariance of human “reality”. Sebeok translated von Uexküll’s term *Umwelten* as “*ecological niche, experienced world, psychological or subjective or significative environment, behavioral life space, ambient extension, ipsefact*, or, expressions that I prefer, *cognitive map or scheme, or even mind set*” (1979: 194). Kull and Torop (2003) used German *Umwelten* untranslated in their English article (2003). My translated version of *Umwelten* was “wor(l)d(scape”, a Peircean term moving from “the Firstness of *moodscape* (image) through the Secondness of *worldscape* (diagram) to the Thirdness of *mindscape* (metaphor)” (Gorlée 2003: 245, 249 replicated 2004: 109, 114).

“translating” – using a different but similar language-sign. The common meaning “carrying something across” from translation to metaphor would signify in both cases the motion or passage of “something” into another verbal and non-verbal language. To be transplanted, this “something” must not only have an old form, which can be exchanged into a new form, but also carrying a meaning, which needs to stay the same. Peirce spoke on “a class consisting of a lot of things jumbled higgledy-piggledy” (CP: 3.454), hardly a logical system. In the process of metaphorical translation, the equivalence between original and likeness is not the same; the replicas are semiotized and semiotized – what remains is only a shade of fidelity, not the real thing. In translation, equivalence is only “some” degree of Peirce’s degenerate problem-solving method (Gorlée 1990). Sebeok trusted of course his own publications regenerated in his alien but totally familiarized English language, but he definitely had a basic skepticism of the quality of translated replicas.

To replace the technical replica for translation, Peirce differentiated between images, diagrams, and metaphors (CP: 2.277). This is his division of icons (called here hypoicons) according to their intertextual similarity to their object(s) in our reality (Sebeok 1985) as they happen in replicated text-manipulative activities such as translation (Gorlée 2004: 105ff.). The art of conversion of one language into another is carried in several cogent but traditional metaphors of fidelity of translation. Some traditional metaphors are “mirror image”, “photograph”, “echo”, and other images with a sensory appeal, a technical production and an element of cultural training of a kind of manipulation within “my own voice coming back to answer itself” (CP: 1.366). These metaphors and others¹⁸ are provided with

18. Don Quixote visited a “printing-house” which had close associations with purveyors and censors for the book-producing community. In Cervantes’s masterpiece, the rhetorical query raised by the knight-errant reads (in English translation) as follows: “... a translation from one language to another, excepting always those sovereign tongues the Greek and the Latin, is, in my opinion, like the wrong side of Flemish tapestry, in which, tho’ we distinguish the figures, they are confused and obscured by ends and threads, without that smoothness and expression which the other side exhibits: and to translate from easy languages, argues neither genius nor elocution, nor any merit superior to that of transcribing from one paper to another; but, from hence, I would not infer that translation is not a laudable exercise; for, a man may employ his time in a much worse and more unprofitable occupation” (Cervantes 1986: 789). Don Quixote’s argument about the sameness of the right and wrong side of the carpet provides a politically-minded game or disguise of translational appearances.

fidelity, in translation called word-for-word (or cry-for-cry as the case may be) equivalence, where the transfer happens to a reversible quasi-sign, despite the different codes and materials involved.¹⁹ These rigid analogies define the image of frozen images (Eco 1984: 222–226). They are a shadow or imprint, without enriching the distance between original and likeness.

The dynamic fusion of conventional and inventive kinds of exploration emerges with semio-mythological metaphors of translation and un-translation. Sebeok would gain in stature through his labor-intensive response to the twelve Labors of the superman Heracles. Sebeok's intellectual exploits are lacking in the performance of martial feats of brave and strong Heracles. Both heroes have performed in an adventurous quest cycle, icons in a kind of Olympic Games running from mortal to deity. For a good but non-semiotic metaphor of translation is the Heraclitean idea of carrying over from one side of the river to another: "You cannot step into the river twice". The Greek fragment of Heraclitus (500 B.C.) is translated in a point-by-point version as "The river where you set your foot just now is gone – those waters giving way to this, now this". This interlingual translation is rephrased as the famous interlingual translation we know: "You cannot step into the same rivers twice" (Heraclitus 2001: 27, Greek text 26, commentary by editor/translator 95–96). A startling thought for translation, since the translator cannot access the same text twice so that thinking and reflection is impossible. The only option for the translator is an intuitive "eureka" understanding of Peirce's musement (Gorlée 2004: 114ff.) over fragments or broken signs or fragments (Gorlée 2007). The translation is reduced from a vortex with rapidly circulating water to a petrified rivulet, whereas the vertiginous flux – a Heraclitean *panta rhei* – survived only secretly, as a suppressed current, like a river driven underground.²⁰

A Janus-like translation would prospectively build on the figure of Sebeok's looking to the left, to the right, forward and backward, upwards and downwards, to the past and reflecting the future, seeing all and knowing all arguments for and against.²¹ Janus (Latin 'ianua', door) was

19. See Peirce's series of replicas in Jacquard's loom machine where equivalent patterns are weaved (CP: 5.473).

20. Peirce semiotically extends Heraclitus's definition (see CP: 1.617, 1.646, 6.325). Heraclitus's idea of impermanence is a forerunner of Peirce's pragmatism, see CP: 1.220, 1.530, 3.418, 4.648, 6.325, 7.215.

21. References to Janus in Sebeok 1985: 657, 1979: 258 and 1981: 222, where Janus is mentioned in the concept of intertextuality, the semio-anthropological approach to linguistics, and the transition from nature to culture. For clues to belief and ritual of Janus, see Frazer's classic *The Golden Bough* (1963: 192f.)

praised as the Roman deity guarding gates and doorways, highly symbolic terms showing passage and transition. Like a *mezuzah* placed on the front door to keep off the evil eye, Janus encouraged us to face worrisome undertakings – such as the transitional “hazards” of translation.²² As “janitor”, Janus was depicted with two faces looking in two directions, as a “bi-facial” sign (a formula repeated by Sebeok 1976: 117f.) guarding both sign and interpretant (including sign and object) as mental leaps faced in translation. Janus made beginnings (Latin ‘*januarius*’, January) and ends. He particularly looked after approaching catastrophes: for early man, the natural and reversible plagues of locusts, drought, exile, and now the complex and irreversible events such as poverty, illiteracy, terrorism and tsunamis.

The semiotic (or better, semiosis) image leads us to “creative” metaphors for translation, which emphasize likenesses (or better, degrees of equivalence) from something observed to something unobserved, but also focus on differences. Semio-translation makes (or perhaps fabricates) biological replicas on a growing tree (Gorlée 2004: 123). As the tree grows, its branches send shoots to the ground, and each branch takes root and forms a new trunk. Eventually, an intricate network of trees unfolds, with the trees having two things in common: all are rooted in the same ground and all are linked, either directly or remotely. And as the tree sprouts new branches, even its oldest, most obscure ones remain alive. The branches are have different colors and models, a different measurement and different styles and reflection responding to nature’s failures and criticisms – perceived by humans as different good, evil and intermediate habits in time and space.²³

-
22. Sebeok left it to others “to screen out the several meanings of the polysemous lexeme *transitional*” (1979: vii). For political clarity of the term “transition”, the original emigré, Sebeok, included the anecdote: “When two Budapest boulevardiers meet, one of them may confront the other with the first half of a familiar wry political one-liner: ‘This is a transitional year!’ The other party is then most likely to rejoin, less with a peal of laughter than a rueful sigh: ‘Yes, it is decidedly worse than last year, but sure to be better than the next’” (1979: vii). One meaning of “transition” is “translation”.
 23. See further the biological metaphors “rhizome” and “onion” (Gorlée 2004a) to picture translation. Peirce argued that “Metaphysics has been said contemptuously to be a fabric of metaphors. But not only metaphysics, but logical and phaneroscopic concepts [as well] need to be clothed in such garments. For a pure idea without metaphors or other significant clothing is an onion without a peel” (MS 283: 132).

Sebeok's quasi-poetic metaphors of biosemiotic (or pre-biosemiotic) origin are focused on the degenerate "mirror" (influenced by Lotman), the biological "echo" reformulation (inspired by von Uexküll), and totemism (inspired by Lévi-Strauss) but then pass on to Thom's images with revolutionary surprises of the dual and triadic meanings of biological and/or anthropological origins (Sebeok 1985: 276, see Sebeok 1979: 120–127). For hunting people, says Lévi-Strauss, a prey is held in totemic regard not because they are "good to eat" but because they are "good to think" (1963: 89). Thom's semio-anthropological "hunt" (1975: 297ff.), deriving from Peirce's semiosis, imagines the similarities between the "functional loop of predator and prey" (quoted in Baer 1987: 200). Following Peirce's "catching" of the moving sign (CP: 2.228, see CP: 3.424), the hunter grasps it to understand its thought and transforms it into a new sign with a new meaning. The hunt is accompanied by loss and breakage of the frozen prey. Bringing life to death is a sign of the survival (feeding) of humankind.

If there is a moving target, the "*organ of alienation*" (Baer 1987: 198) can also become something different than the warlike hunt, giving an open and hospitable meeting for predator and prey. The dynamic and causal interpretation leads the frozen prey to become fossilized, out of icon, and index towards symbol. One can either withdraw from the persecution of the predator or speak on the animal as a bio-syntactic event and make it a conversational issue (Sebeok 1979: 123). The urge to kill tends to create a different outlet in sports and amusement, seeking a minor or episodic expression. In the "new" hunt we search, follow and take moving game in a productive but merely symbolic manner. The life of symbolic wild animals is more resistant to damage and easier to repair, regulate, and maintain. The prey (sign) is not fixed but has a certain "plasticity" and can be attached to a new isomorphy of structure (as a translation operation, from source sign to target sign) (quoting Thom in Sebeok 1979: 123–124).

If we apply Sebeok's semiotic influence to Thom's catastrophe relating to physics and information theory (1975, 1983, 1985) we adopt the mental patterns of a game (Thom 1983: 296ff., Gorfée 1994: 70ff.). My notion of the "black box" (Gorfée 2010) of the translators is a game reflection on the omniscience of their hunt, reflecting how the sign (prey) is dominated not by a social, but a socio-economic competition to "kill" the parasitic or cannibalistic nature of the sign (predator). The translator's mind is no longer a murderous killer, but has mixed attitudes towards the moving images of the source "victim" of the sporting game: conflict as

well as a degree of sympathy – a mixed sign that Sebeok would have enjoyed. Thom stated that “the predator *becomes its prey*” (1975: 298). From the source language, the sign “jumps” through “shocks of attractors” (Firstness) and “local accidents” (Secondness) into a foreign language and culture (Thirdness) with new ideas. The target sign provides a new dynamic and causal interaction between the hunter and the new target speakers. The translation is no longer a dead (reversible) murder but has changed into a irreversible transformation, giving new life.

The metaphor of the hunt is, like *traduttore traditore*, full of ambiguity and contradiction in the eyes of the predator and the prey (the subject and object of the hunt). Translation is no longer the transformation of a metabolic field into a static one, but now requires an infinite number of local transformations in order to achieve the transformation from static to metabolic field. Catastrophe theory is a mathematical treatment of continuous action, producing a discontinuous result. The “game” of catastrophe theory provides a convenient formalism to discuss the positive and negative metaphors for spatial and temporal “catastrophes” of translation. Translational activity simulates a catastrophe which is no longer trial-and-error behavior, but a doing-and-making consisting of “loophole” actions and reactions. The catastrophe of translation is thereby no abstraction, but an organic but puzzling continuity of semio-translation of meanings, speaking louder than words (Eccl. 6: 11), yet a mysterious process worth studying.

Sebeok was not only a many-sided and highly prolific semiotic genius, integrating hard sciences into humanities. He was also a warm and generous personality, and certainly a great storyteller.²⁴ Part of Sebeok’s success lay in his talent for telling anecdotes, jokes, and other stories, which could occasionally be more profound, more creative than generalizations. Sebeok also enjoyed Jakobson’s humorous anecdotes which, like Sebeok’s, “could fill a modest-sized monograph” although Sebeok suspected that Jakobson “secretly engendered most of them himself, such stories tend to take on a life of their own, becoming collective property” (Sebeok 1979: 229). A dash of Sebeok’s anecdotes – rephrased in terms of the argument in Sebeok (1979: ix) – here simplified, spoke of the True Interpreter, Freud, entering a classroom to give his first lessons on psychoanalysis, sporting a big cigar. The assembled (male) medical students, fixing upon the cigar as an obvious phallic symbol, burst into loud

24. See the stories included in Sebeok’s articles and books, and the posthumous article Sebeok (2003) about hybrid jokes.

laughter. “Gentlemen”, Freud then said, undisturbed, “sometimes a cigar is nothing but a cigar”. Sebeok cheerfully made this picaresque joke about the special distinction between a sign and a non-sign in order to show a symptomatic sign of the pros and cons of sign theory.

Retelling some of Sebeok’s anecdotes, I might also mention a tiny handwritten message received from Sebeok’s hands during a congress. The joking message was critical of a paper; Sebeok’s beginning paragraph was about the grammatical criticism of the librarian of Alexandria. His poem looked at first sight to be simple like a short lyric: “Apollonius Dyscolus / Thinks syntax ridiculous!” – but followed by unpoetical points in controversy: “But Thrax? Sux!” Consciously and unconsciously using Jakobson’s poetical material and interjective style, Sebeok’s poem used “expressive features to indicate his angry or ironic attitude, [since language] conveys ostensible information” (Jakobson’s presidential address of 1956, published in Jakobson 1980: 82). Sebeok’s use of Latin(ized) proper names followed by both rhymed exclamations of each one emotive syllable are his own comical twist to the rhyme-and-rhythm epithet.²⁵

Sebeok’s judicious but good humored anecdotes, epistles, and actions helped me to labor on my own the project on the Peircean wizardry of semiotic translatology. He generously invited me to be research associate at the Research Center for Language and Semiotic Studies in Indiana University at Bloomington, IN, mediating my entrance to the Peirce Edition Center at Indianapolis, IN. I spent wonderful and fruitful years studying and writing in this world unto itself (1988 and following years). During my stays of continuous learning and study, the Bloomington University Library in Bloomington was a paradise, as was the discovery and exploration of Peirce’s unedited manuscripts, where I looked for his mentionings of translation (Gorlée 1992).

Sebeok told me, jokingly or not, that the only Dutchmen he liked were those living abroad – fortunately (and unfortunately) I was a Dutch national living in two “alien” countries, Norway and United States, a real foreigner. In our (for myself) knowledge-intensive conversations, Sebeok triggered the “savage thought” of my interdisciplinary nature: during a lunch in a Bloomington restaurant, he jokingly invited me to

25. Jakobson discussed his poetical function of language, using as expressive or emotive example Conan Doyle’s interjections “*Tut! Tut!*” said McGinty”; the complete utterance of Conan Doyle’s character consists of two suction clicks . . . [and the exclamation rests] on their phonic, grammatical, and lexical level” (1980: 82).

prepare a semiotic lecture about crystallography – Peirce’s annunciatory opening to crystallography as special “classificatory” science (NEM: 4: 17) was not “translated” further. Why not a new search for the growth of crystals dealing with their “translated” forms, models and patterns – certainly a speculative guess forward for my memory, but a dubious idea. Yet Sebeok’s idea announced Thom’s mathematical concerns of semiosis. Within the invisible “black box” of the mind of the translator, we experience a discrete jump in knowledge, where discrete (continuous) content leaps forward to non-discrete (discontinuous) material (Gorlée 2003: 240, 2004: 104, 124, 186). A translation is a man-made (woman-made) activity and a translator is certainly no machine.

While spinning the semiotic web (Gorlée 2004: 18 f.), I looked after Sebeok’s two daughters (Jessica and Erica Sebeok) some days, when he and his wife, Jean Umiker-Sebeok had to work elsewhere. During their absence from home I was allowed to work in a corner of Sebeok’s study. After the household activities and chatting to the girls, I read and read books from Sebeok’s wonderful library collection. Meanwhile I also secretly read his clues uncovering his creative personality. His definite order and organization was “translated” into the beauty of the free creativity in his scholarship. Maybe I was transmogrified within this quiet but busy week of secret conversation (and converse) with Sebeok, into a Peircean-Jakobsonian-and-otherwise but certainly a Sebeotic epigone. I copied Sebeok’s maxims, saying “Early abroad, to sow thy seed, and let evening find thee still at work” and “Here is one that works alone, . . . yet still works on, never content with his bright load, never asking, as he toils and stints himself, who shall gain by it” (Eccl. 11: 6, 4: 8). Sebeok was sober, diligent, cheerful and was, epigrammatically said, the early bird that may have been up all night and working early in the morning.

During a decade of smooth sailing down the Norwegian fjords, I was invited to move from the Romance Languages department of the University of Bergen to work as general linguist to work in the Wittgenstein Archives – a happy move. Meanwhile I led the growing Norwegian Association of Semiotics and the Nordic Association of Semiotics to become a center for semiotic interdisciplinarity. Yet my “alien” temperament seemed to plague some senior colleagues who crossed my non-semiotic paths and thought I was rocking the semiotic boat too much. I was out of the established order and had to leave my philosophical-linguistic work at the Wittgenstein Archives. Then, in the official record of my appointment to a senior position, my semiotic and transdisciplinary research was chastised for a lack of academic understanding, as it seemed

in Norway's conventional academia. The report arrived by mail at the Research Center for Language and Semiotic Studies in Indiana University at Bloomington, where I was working during the summer. Sebeok laughed, strongly emphasizing my uphill battle to persuade the semiotically unknowing. I followed Sebeok's *carpe diem* in tragic situations to maintain denial situations, against the rules of Ecclesiastes (esp. Eccl. 9: 11). Secretly uneasy, but listening to the Preacher's words "to-day's gain, to-morrow's loss" (Eccl. 3: 6), I followed Sebeok's gallows humor and seized the maelstrom today to provide a path towards my future.²⁶

Epiphany

There is no knowing how best his life should be spent,
 this brief pilgrimage that passes like a shadow, and is gone.
 And what will befall after is death in this world beneath the sun,
 who can tell? There is no embalming like a good name left behind;
 man's true birthday is the day of his death. (Eccl. 7: 1–2)

After wandering off into Sebeok's epiphenomena with their panoramic makeup of his scientific grandeur, the echoes left over – the final opinion or definitive statement, against Peirce's honest belief – is alas the intimate feeling of silence after losing his company and confidence. Peirce (CP 7.547, see 7.554) memorized that

... our whole past experience is continually in our consciousness, though most of it sunk to a great depth of dimness. I think of consciousness as a bottomless lake, whose waters seem transparent, yet into which we can clearly see but a little way.

Memory is rarely exact and can be easily distorted and, continuing this metaphor, memory can "become a continual fall of rain upon the lake" (CP: 7.553). The allegory told some episodic stories protagonized with Sebeok's expressive character, but reflected in my individual sphere of

26. I was invited as visiting professor at different universities and turned entrepreneur of a multilingual legal translation agency. As independent scholar I obeyed Peirce's statement that "[t]ruth, crushed to earth, shall rise again" (CP: 1.217, 5.408, MS L75D: 234). My passion for writing books and articles in semio-translation has grown steadily. Wittgenstein Archives appointed me as research scholar.

life. But how to celebrate the life-flame of a semiotic master, his “potential energy” (CP: 7.553) to speak, write, and find out when Sebeok is no more here to turn to? Turning back to myth or running away to reason? Maybe by trying to find the right cue to find and trying to continue his “medium of consciousness” (CP: 7.554). This futurology signifies the rescue from the mythical formations layered in our memory and a novel formation of Sebeok’s content of sensation, when at all possible.

Sebeok’s revelation catches a glimpse to show that language – now epiphanized as biotranslation (see note 11) – is seen from Thom’s catastrophe theory provided with a biochemical substrate and connected with an unstable discontinuity beyond the conceptual possibilities of observation. Linguistic forms are mixed interforms between inert matter and life with their own dynamics (Thom 1975: 297ff.). Within intralingual, interlingual and intersemiotic types of translation, the source language (or “language”) may have different structural, syntactic, semantic, pragmatic and other interforms than the target language. Following Peirce’s abductive phenomena and Thom’s biological influence about morphogenesis, Sebeok showed in the course of his own Robinsonade an epiphanic work of art, like a scientific argument. In the strength of Sebeok’s cyberspace, we possess and manipulate a chaos and cacophony of free speech accompanied by the encryption of dislocations in (in)variant creativity of speech. In the meantime, the global structure of life becomes more and more cyborgized, whereas our search of Sebeok’s iconographical names, the greatness of genius, and the crystalline growth of crystals (and other topics) leads me to study the elementary and complex catastrophes in language and translation. On this point, Sebeok’s biological way treats translation as discontinuous accidents (or topological rotations) to reach a supposedly uniform version, following Peirce’s ubiquity of categories and abductive elements (Gorlée 1994, 2004). Thanks to the warm friendship I enjoyed with Sebeok, my further musings need to suggest, clarify, and discuss the accidents of translations as forms of Thom’s catastrophe.

As an epilog, Sebeok suffered his own catastrophe in the trials of old age. The scriptural phrase Eccl. 12: 2f. shows what Thom characterized as a “sliding catabolic catastrophe” (1975: 283–286). Facing calamity was followed by Thom’s sudden accident: Sebeok’s death. He has reached his “everlasting home” whereas “the mourners are astir in the streets” (Eccl. 12: 5). As a mourner, I owe a debt of deep gratitude for Sebeok’s lantern of tradition and innovation. I never asked him anything (which he liked), but he generously gave me the gift of friendship, security, humor, and scholarship. We could end with Pope’s lines about the com-

ination and its end of wisdom and humor, taken from his originally 1733 *Essay on Man* (Epistel I, lines 87–90, Pope 1950: 24–25) and derived from Sebeok’s own *The Sign & Its Masters* (1979: 26):

Who sees with equal eye, as God of all,
A hero perish or a sparrow fall,
Atoms or systems into ruin hurl’d,
And now a bubble burst, and now a world.

References

- Baer, Eugen
1987 “Thomas A. Sebeok’s Doctrine of Signs”, in *Classics of Semiotics*, ed. Martin Krampen, Klaus Oehler, Roland Posner, Thomas A. Sebeok and Thure von Uexküll. Foreword Thomas A. Sebeok. of Semiotics (English trans. of *Die Welt als Zeichen: Klassiker der modernen Semiotik* [Berlin: Wolf Jobst Siedler Verlag, 1981] = Topics in Contemporary Semiotics; Dordrecht, The Netherlands: Springer), 181–210.
- Bible
1956 *The Holy Bible: A Translation from the Latin Vulgate in the Light of the Hebrew and Greek Originals*.
Authorized by the Hierarchy of English and Wales and the Hierarchy of Scotland (2nd ed. London: Burns & Oates; 1st ed. in one volume, 1955).
- Bloom, Harold
2002 *Genius: A Mosaic of One Hundred Exemplary Creative Minds* (New York: NY: Warner Books).
- Brower, Reuben A., Editor
1959 *On Translation*. New York, NY: Oxford University Press).
- Cervantes, Miguel de
1605, 1615 *The Adventures of Don Quixote de la Mancha*, trans. Tobias Smollet, with an Introduction by Carlos Fuentes (London: André Deutsch, 1986 [1st edition of Spanish first part in 1605 and second part in 1615; Smollet’s English translation is from 1755]).
- Chafe, Wallace L.
1973 “Siouan, Iroquoian, and Caddoan”, in Sebeok ed. 1973: 1178–1209.
- Coleridge, Samuel Taylor
1816 *The Statesman’s Manual; or the Bible the Best Guide to Political Skill and Foresight: A Lay-Sermon, Addressed to the Higher Classes of Society*, in his *Biographical Sketches of My Literary Life and Opinions* (London: Bell and Daldy, 1866), 305–367.

- Deely, John
1978 "What's in a Name", in *Semiotica* 22: 151–181 (review-article of Sebeok 1976).
- Deely, John, Editor
1995 *Thomas A. Sebeok Bibliography 1942–1995* (=Arcadia Bibliographica Virorum Eruditorum, 15; Bloomington, IN: Eurolingua).
- Denny, Dann
1988 "Taking a Peek at the 21st Century. Futurists: Those Born in '88 Will Enjoy Better Health, Pay Higher Taxes", in *Sunday Herald-Times* (January 3) Section E Lifestyle: 1 (interview with Thomas A. Sebeok).
- Eco, Umberto
1997 *The Search for the Perfect Language*, tr. James Fentress. London: Fontana Press of Harper Collins Publishers (1st ed. 1995).
- Eco, Umberto
2003 *Mouse or Rat? Translation as Negotiation* (London: Weidenfeld & Nicolson).
- Frazer, Sir James George
1963 *The Golden Bough*. Volume 1, abridged ed. New York: MacMillan Publishing (1st ed. in 12 volumes in 1955).
- Gorlée, Dinda L.
1987 "Firstness, Secondness, Thirdness and Cha(u)nciness", in *Semiotica* 65 (1/2): 45–55.
- Gorlée, Dinda L.
1990 "Degeneracy: A Reading of Peirce's Writing", in *Semiotica* 81 (1/2): 71–92.
- Gorlée, Dinda L.
1992 "Peirce's Paradise: A Visitor's View on Research and the Peirce Edition Project", in Gérard Deledalle and Janice Deledalle-Rhodes (eds.) *Signs of Humanity | L'homme et ses signes* (=Proceedings of the 4th World Congress of the International Association for Semiotic Studies [IASS-AIS], Barcelona and Perpignan, 1989; 3 vols. Berlin: Mouton de Gruyter), Vol. 2, pp. 1277–1281.
- Gorlée, Dinda L.
1994 *Semiotics and the Problem of Translation: With Special Reference to the Semiotics of Charles S. Peirce* (=Approaches to Translation Studies, 12; Amsterdam and Atlanta, GA: Rodopi).
- Gorlée, Dinda L.
1996 "Opera Translation: Charles Peirce Translating Richard Wagner", in *Musical Semiotics in Growth*, ed. Eero Tarasti (=Acta Semiotica Fennica, 4; Bloomington, IN and Imatra: International Semiotics Institute), 407–425.
- Gorlée, Dinda L.
1997 "Intercode Translation: Words and Music in Opera", in *Target* 9.2. 235–270.

- Gorlée, Dinda L.
1999 “Legal Drama: A Semiotic Approach”, in *Face: Revista de Semiótica e Comunicação* (Special issue: Caos e orden na mídia, cultura e sociedade), 246–256.
- Gorlée, Dinda L.
2002 “Grieg’s Swan Songs”, in *Semiotica* 142 (1/4): 152–210.
- Gorlée, Dinda L.
2003 “Meaningful Mouthfuls in Semiotranslation”, in Susan Petrilli, Editor. *Translation Translation* (=Approaches to Translation Studies, 21; Amsterdam and New York: Rodopi, 235–252.
- Gorlée, Dinda L.
2004 *On Translating Signs: Exploring Text and Semio-Translation* (=Approaches to Translation Studies, 24; Amsterdam and New York, NY: Rodopi).
- Gorlée, Dinda L.
2004a “Horticultural Roots of Translational Semiosis”, in Gloria Withalm and Josef Wallmannsberger (eds.) *Macht der Zeichen – Zeichen der Macht | Signs of Power – Power of Signs. Festschrift für Jeff Bernard | Essays in Honor of Jeff Bernard* (=TRANS-Studien zur Veränderung der Welt, 3; Vienna: INST, 164–187.
- Gorlée, Dinda L.
2005a “Prelude and Acknowledgments” and “Singing on the Breath of God: Preface to Life and Growth of Translated Hymnody”, in Dinda L. Gorlée, Editor. *Song and Significance: Virtues and Vices of Vocal Translation* (=Approaches to Translation Studies, 25; Amsterdam and New York, NY: Rodopi, 7–15, 17–101.
- Gorlée, Dinda L.
2005b “Hints and Guesses: Legal Modes of Semio-Logical Reasoning”, in *Sign Systems Studies* 33 (2): 239–272.
- Gorlée, Dinda L.
2007 “Broken Signs: The Architectonic Translation of Peirce’s Fragments”, in *Semiotica* 163 (1/4): 209–287.
- Gorlée, Dinda L.
2010 “The *Black Box* of Translation: A Glassy Essence”, in *Semiotica* 180 (1/4): 79–114.
- Gorlée, Dinda L., Editor
2005 *Song and Significance: Virtues and Vices of Vocal Translation* (=Approaches to Translation Studies, 25; Amsterdam and New York, NY: Rodopi).
- Gorlée, Dinda L.
2008 “Wittgenstein as Mastersinger”, in *Semiotica* 172 (1/4): 97–150.
- Gunn, Giles
1992 “Interdisciplinary Studies”, in Joseph Gibaldi, Editor. *Introduction to Scholarship in Modern Language and Literatures*. 2nd ed. New York, NY: The Modern Language Association of America (MLA), 239–261.

- Heraclitus
 2001 *Fragments: The Collected Wisdom of Heraclitus*, Brooks Haxton (ed. and trans.). Foreword James Hillman (New York: Viking of Penguin Group).
- Holmes, James S., Editor
 1970 *The Nature of Translation: Essays on the Theory and Practice of Literary Translation* (=Approaches to Translation Studies, 1; The Hague and Paris: Mouton).
- Jakobson, Roman
 1959 “On Linguistic Aspects of Translation”, in Reuben A. Brower, Editor. *On Translation*. New York, NY: Oxford University Press, 232–239.
- Jakobson, Roman
 1980 “Metalanguage as a Linguistic Problem”, in his *The Framework of Languages*, as ed. by Irwin R. Titunik and Ladislav Matejka (eds.) (=Michigan Studies in the Humanities, 1; Ann Arbor, MI: University of Michigan).
- Kull, Kalevi and Peeter Torop
 2003 “Biotranslation: Translation between *Umwelten*”, in Susan Petrilli, Editor, *Translation Translation* (=Approaches to Translation Studies, 21; Amsterdam and New York: Rodopi), 315–328.
- Lévi-Strauss, Claude
 1962 *La pensée sauvage* (Paris: Plon).
- Lévi-Strauss, Claude
 1963 *Totemism*, tr. Rodney Needham (Boston, MA: Beacon [English trans. of French *Le totémisme aujourd’hui*. Paris : Presses Universitaires de France (PUF), 1962]).
- Lotman, Jurij M.
 1987 “Semiotics and Culture in the Second Half of the Twentieth Century”, in *Livstegn* 3: 7–8 (in Russian).
- Neihardt, John G.
 1961 *Black Elk Speaks: The Life Story of a Holy Man of the Oglala Sioux as Told to John G. Neihardt*. London: Barrie & Jenkins (English trans. of interviews with Black Elk; 1st edition is New York: NY: William Morrow & Company, 1932).
- Nida, Eugene A.
 1959 “Principles of Translation as Exemplified by Bible Translating”, in Reuben A. Brower, Editor. *On Translation* (New York, NY: Oxford University Press, 11–31).
- Nida, Eugene A.
 1964 *Towards A Science of Translating: With Special Reference to Principles and Procedures Involved in Bible Translating* (Leiden: E.J. Brill).

- Nida, Eugene A.
2003 *Fascinated by Languages* (Amsterdam and Philadelphia, PA: John Benjamins).
- Peirce, Charles Sanders
1857–1890 *Writings of Charles S. Peirce: A Chronological Edition*, initiated as the Peirce Edition Project at Indiana University-Purdue University/Indianapolis by Edward C. Moore under the general editorship of Max H. Fisch, succeeded first by Christian Kloesel in late 1984, and then in late 1993 by Nathan Houser (Bloomington: Indiana University Press, 6 of a projected 20 volumes: 1857–1866 (vol. 1, 1982); 1867–1871 (vol. 2, 1984); 1872–1878 (vol. 3, 1986); 1879–1884 (vol. 4, 1989); 1884–1886 (vol. 5, 1993); 1886–1890 (vol. 6, 2000).
- Peirce, Charles Sanders
1864–1914 *The New Elements of Mathematics*, ed. Carolyn Eisele (The Hague: Mouton, 1976), 4 volumes bound as 5. Standardly abbreviated NEM.
- Peirce, Charles Sanders
1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Fictae Disjecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Peirce, Charles Sanders
1867–1913 *The Essential Peirce (1867–1893), Volume 1*, ed. Nathan Houser and Christian Kloesel (Bloomington, IN: Indiana University Press, 1992); *The Essential Peirce (1893–1913), Volume 2*, ed. Nathan Houser, André De Tienne, Jonathan R. Eller, Cathy L. Clark, Albert C. Lewis, D. Bront Davis (Bloomington, IN: Indiana University Press, 1998). Volume 1 duplicate materials from CP, but volume 2 consists of previously unpublished manuscripts. The abbreviation EP followed by volume and page number(s) is a standardized reference form.
- Peirce, Charles Sanders
1869–1908 *Charles Sanders Peirce: Contributions to The Nation*, in 4 volumes, ed. Kenneth Laine Ketner and James Edward Cook: *Part 1 (1869–1893)*, *Part 2 (1894–1900)*, *Part 3 (1901–1908)*, *Part 4, Index to the whole* (Lubbock, TX: Texas Technological University Press, 1975, 1975, 1979, 1987).

- Pope, Alexander
1950 *An Essay on Man, Or the First Book of Ethic Epistels to H. St. John L. Bolingbroke*, Maynard Mack, Editor. (=Vol. III.i of 11 vols. of *The Twickenham Edition of the Poems of Alexander Pope*, John Butt, gen. ed.; London: Methuen, 1st ed. in 1733–1734.
- Sebeok, Thomas A.
1947 “Two Winnebago Texts”, in *International Journal of American Linguistics* 13: 167–170.
- Sebeok, Thomas A.
1974 *Structure and Texture: Selected Essays in Cheremis Verbal Art* (=De Proprietatibus Litterarum, Series Practica, 44; The Hague and Paris: Mouton).
- Sebeok, Thomas A.
1976 *Contributions to the Doctrine of Signs* (Bloomington, IN: Indiana University and Lisse: The Peter de Ridder Press).
- Sebeok, Thomas A.
1979 *The Sign & Its Masters* (Austin, TX and London: University of Texas Press).
- Sebeok, Thomas A.
1981 “Prefigurations of Art”, in his *The Play of Musement* (=Advances in Semiotics; Bloomington, IN: Indiana University Press, 210–259 (changed reprint from 1978, 1979).
- Sebeok, Thomas A.
1984 *Communication Measures to Bridge Ten Millennia* (Columbus, OH: Batelle Memorial Function, Office of Nuclear Waste Isolation).
- Sebeok, Thomas A.
1984a “Signs of life”, in *International Semiotic Spectrum* 4 (June): 1–2.
- Sebeok, Thomas A.
1985 “Enter Textuality: Echoes from the Extra-Terrestrial”, in *Poetics Today* 6 (4): 657–663.
- Sebeok, Thomas A.
1985a “Zoosemiotic Components of Human Communication”, in Robert E. Innis (ed. and intro.) *Semiotics: An Introductory Anthology* (=Advances in Semiotics; Bloomington, IN: Indiana University Press, 292–324 (changed reprint from 1977).
- Sebeok, Thomas A.
1986 “Livstegn”, in *Livstegn* 1: 16–20 (Norwegian trans. of Sebeok 1984).
- Sebeok, Thomas A.
1986a *I Think I am a Verb: More Contributions to the Doctrine of Signs* (=Topics in Contemporary Semiotics; New York and London: Plenum Press).
- Sebeok, Thomas A.
1987 “Introduction”, in *Livstegn* 3: 12–13.

- Sebeok, Thomas A.
1987a "Om teiknlæra", in *Livstegn* 3: 164–180 (Norwegian tr.).
- Sebeok, Thomas A.
1988a "Foreword", in Daniel L. Lucid (ed., trans. and intro.) *Soviet Semiotics: An Anthology*. With a new Foreword [to the paperback edition] by Thomas Sebeok (Baltimore, MD and London: John Hopkins, v–viii).
- Sebeok, Thomas A.
1991 *Semiotics in the United States* (=Advances in Semiotics; Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
2001 "The Estonian Connection", in his *Global Semiotics* (=Advances in Semiotics; Bloomington and Indianapolis, IN: Indiana University Press, 160–171).
- Sebeok, Thomas A.
2003 "Intersemiotic Transmutations: A Genre of Hybrid Jokes", in Susan Petrilli, Editor. *Translation Translation* (=Approaches to Translation Studies, 21; Amsterdam and New York: Rodopi, 307–312).
- Sebeok, Thomas A., Editor
1958 *Myth. A Symposium* (Bloomington, IN and London: Indiana University Press; reprinting of 1955).
- Sebeok, Thomas A., Editor
1960 *Style and Language* (Cambridge, MA: The Technological Press of Massachusetts Institute of Technology).
- Sebeok, Thomas A., Editor
1973 *Linguistics in North America*, Volume 10, Part II, of *Current Trend in Linguistics* (The Hague and Paris: Mouton).
- Sebeok, Thomas A, S. M. Lam, and J. O. Regan, Editors
1988 *Semiotics in Education: A Dialogue* (=Issues in Communication, 10) (Series of seminars at The Claremont Graduate School, Spring 1987; Claremont, CA: College Press).
- Shipley, Joseph T., Editor
1972 *Dictionary of World Literature. Criticism · Forms · Technique* (New revised ed. Totowa, NJ: Littlefields, Adams & Co.).
- Singer, Milton
1984 *Man's Glassy Essence: Explorations in Semiotic Anthropology* (=Advances in Semiotics; Bloomington, IN: Indiana University Press).
- Steiner, George
1975 *After Babel: Aspects of Language and Translation* (Oxford: Oxford University Press).
- Thom, René
1975 *Structural Stability and Morphogenesis*, tr. D. H. Fowler and C. D. Waddington (Reading, MA: W. A. Benjamin [English trans.

- of French *Stabilité structurelle et morphogénèse: Essai d'une théorie générale des modèles* (New York : Benjamin and Paris : Ediscience, 1972)].
- Thom, René
1983 *Mathematical Models of Morphogenesis*, tr. W. M. Brookes and D. Rand (Chichester, West Sussex, UK: Ellis Horwood Limited [English trans. of French *Modèles mathématiques de la morphogénèse*. 2nd ed. Paris: Christian Bourgois, 1980, with additional updatings]).
- Thom, René
1985 “From the Icon to the Symbol”, in Robert E. Innis (ed. and intro.) *Semiotics: An Introductory Anthology* (=Advances in Semiotics; Bloomington, IN: Indiana University Press, 272–291 (changed reprint from French article of 1973).
- Toury, Gideon
1986 “Translation: A Cultural-Semiotic Perspective”, in Thomas A. Sebeok (gen. ed.) *Encyclopedic Dictionary of Semiotics*. 3 vols (Berlin: Mouton de Gruyter, 2: 1111–1124).
- Wheelwright, Philip
1958 “The Semantic Approach to Myth”, in Sebeok ed. 1958: 154–168.
- Wilss, Wolfram, Editor
1980 *Semiotik und Übersetzen* (=Kodikas/Code Supplement, 4; Tübingen: Gunter Narr Verlag).

Chapter 9

Astonishing life

Jesper Hoffmeyer

Born during the Second World War in occupied Denmark, and to a family with strong anticlerical and moderate leftist persuasions, I was destined to develop a materialistic and indeed positivistic understanding of our world. To fight irrationalism in all its disguises was an inherent value in my upbringing, and in choosing to become a biochemist I faithfully continued along this path. But up through the 60s and 70s I increasingly felt uneasy at being an accessory to the obviously inhumane consequences of modern technology; and contrary to many kindred spirits, I could not content myself simply to criticize the technological or political aspects of development.¹ I had to confront the deeper suspicion that materialistic science might itself carry an inherent source for the inhumanity that technologies based upon its outlook so often implied: not only as pollution, ecological destruction, or unwanted side effects in bioengineering and medical practices in general, but also as misguided beliefs in scientific reductionism (e.g. genetic determinism in its diverse disguises) as a basis for the understanding of complex psychological and social phenomena. It gradually occurred to me that some of the central tenets of the materialistic self-confidence were perhaps less secure than usually assumed. Most importantly, the belief in natural selection as an exhaustive explanation for the evolution of purposive behavior in nature might be somewhat exaggerated, for how could a world ruled solely by inescapable natural laws give rise to human beings with inalienable experience of possessing free will? How can lawfulness explain the appearance of unlawfulness?

The option of denying the reality of unlawfulness in the natural world, and thus of human free will, is tempting, of course, and I must admit that I have sided with this option for many years. This eliminative strategy

1. Neither, of course, could I subscribe to the popular conception of technology in post-Hiroshima Europe as an inherently dangerous and alienating thing and the accompanying nostalgic imaginations of the world of old days. Or to the aggressive New Age philosophizing with its belief in supernatural powers as solution the problems of modern civilization.

furthermore has the advantage that it cannot be proven wrong; and although it cannot be proven right either, the rejection of it nevertheless seems dangerous, because it is easily conceived as giving in to religious or mystical intervention where scientific thinking is needed.

But eliminativism is indeed a strongly counter-intuitive conception of human existence. We are all embedded in an experiential world that seems meaningless unless we are indeed “first person” beings, each of us an “I”. And how can scientific descriptions that are necessarily made in terms of third person language ever explain the existence of first person experiences? Needless to say, intuitions differ on this.

It occurred to me, however, that there is a strange lacuna underneath most theorizing on these questions. For, *au fond*, why is it that the rejection of the notion of natural selection as explanation for purposive behavior is seen as threatening to scientific rationality? We are not here talking about rejecting natural selection as an important mechanism for evolutionary change, but only of the rejection of this mechanisms as *the exhaustive* explanation for evolution of end-directed activity in the natural world, and thus for the evolution of humanness. Why, in other words, should we accept a borderline around science such that the mere allowance for activities in the natural world that are not absolutely subdued to natural laws must be classified as unscientific?

The general skepticism in scientific society towards so-called emergentist theories, however, seems to confirm the tacit acceptance of such a borderline. Excluded from science by this borderline is a possible alternative candidate to natural selection as a mechanism for explaining the evolution of purposive behavior, a principle I have called *semiotic emergence*, i.e., the establishment of high level organization based on situated semiotic exchange between subcomponents (Hoffmeyer 2009). Thus, to take just one fashionable example: so-called altruistic² behavior need not have evolved because of alleged increases in the inclusive fitness of alleged “genes for” such behaviors. Instead, ‘altruistic’ behavior may have emerged in populations simply as part of a pattern of semiotic interactions that, taken together, would scaffold an important aspect of group life (*ibid*,

-
2. The behavior is altruistic in the technical sense that it lowers the fitness of the individual performing it while contributing positively to the fitnesses of the other individuals in the group (for instance by giving them a better chance of escaping). This, of course, has nothing to do with altruism, as we understand the term in human social life, e.g. in the sense of Mother Theresa seen as behaving altruistic.

chapter 7). The alarm calls of birds or monkeys, for instance, do not necessarily have to be connected to the presence or absence of particular genes, but might simply be an unavoidable result of an emotional response that follows from the general communicative practices of the concerned animals. Being advantageous for the group, there is no way that natural selection could work against it, even if the call was severely disadvantageous for the unfortunate individual that happens to first become aware of the threat and calls out. The only way natural selection could counteract it would be by favoring mutants with a decreased general awareness or decreased communicative response to emotional states. But such mutants, most likely, would not fare well in social life.³

Thus, simply by assuming semiotic interactions among individual organisms to be part of the natural world, many kinds of purposeful behavior patterns might emerge without natural selection having to be directly involved in the process. If such emergent behavioral patterns are sufficiently advantageous, natural selection might afterwards be expected to “scaffold” the patterns by favoring minor genetic adjustments that would facilitate the upholding and transmission of the concerned interaction patterns from generation to generation. But this does not detract from the fact that semiosis as a *vis a prospecto*, rather than selection as a *vis a tergo*, in this case is the key to the evolution of end-directed behavior. And seeing natural semiosis rather than natural selection as the motive force behind the evolution of purposive behavior makes a decisive difference. For semiosis inescapably implies an element of Peircean Thirdness, i.e. mediation, whereas natural selection, as presently defined in evolutionary theory, remains safely inside the domain of Secondness. And while the domain of Secondness cannot, logically, evolve to produce creatures

3. Notice, that this ‘mechanism’ is not sensitive to the common neoDarwinian objection to classical theories of group selection (e.g. Wynne-Edwards 1962). *Animal Dispersion in Relation to Social Behaviour*. Edinburgh, Oliver and Boyd. that due to a higher fitness of eventually “selfish mutations” such mutations would gradually come to prevail in the group and thus eliminate the altruistic behavior no matter how advantageous such behavior might be for the group. This objection fails because semiotic emergence is not based on the occurrence of special mutational events that stand to test for natural selection, but rather depends on the holistic advantage of semiotic interaction patterns based on general semiotic competences of individuals and not on behaviors acquired for the particular purpose of the concerned altruistic behavior.

with consciousness and first person experiential worlds, the domain of Thirdness does not preclude, and might perhaps even entail, such an outcome. By assuming processes of semiosis to be part of the natural world, we might, therefore, at least in principle, explain what natural selection is not capable of explaining: The existence in nature of human beings with a free will.

Now, it is of course exactly this element of Peircean Thirdness, clinging to the conception of natural interpretative or semiotic processes, that will light the alarms in the scientific mind. Does not such a suggestion automatically entail the introduction of supernatural explanatory principles? I guess the simple answer to this question is that the rejection of such an idea is no less based on metaphysical prejudices beyond our means of proof than is the acceptance of it. But since the acceptance of the conception makes first person experiences understandable, while the rejection leaves such experiences to be illusory, the most parsimonious choice seems to be to accept the notion of semiosis as a natural process within the physical world.

In the late 1980s, I decided to brave the “common sense” conceptions of the natural science society in Denmark (i.e., the ways of looking at the situation that had become customary in scientific circles) by actively engaging my research in pursuing a study of natural semiosis.

This decision did bring me outside the good company of many scientists, but fortunately it also brought me into the very good company of Thomas A. Sebeok. Not that Tom, as far as I know, ever quarreled with natural selection; but as the originator of the concept of zoosemiotics and, on the whole, of a semiotic understanding of communicative behavior in the life sphere, he obviously took a broadminded view on the kind of causative agents at play in the life sphere (Sebeok 1963; Sebeok 1977; Sebeok 1979; Sebeok 1985 [1976]).

The idea of animals as semiotic creatures was probably as much at odds with hegemonial conceptions in the humanities as was the idea of natural semiosis in the scientific establishment. The borderline between nature and culture has served all too well as a non-aggression pact, protecting both sides against the troubles of dealing with tough questions of how theories can accommodate to the fact of organic evolution. Few would really deny that organic evolution has indeed taken place, and that therefore humans and animals cannot belong to independent realms of existence; but both sides – the ‘scientists’ and the ‘humanists’ – clearly prefer not to confront the obvious consequences of this fact: that semiosis

is not the privilege of human beings,⁴ and that a decent theory of organic evolution must account for the origin of human semiosis through a process that necessarily will have to consider the evolutionary trend towards a production of species capable of exhibiting more and more sophisticated kinds of semiotic activity – mammals clearly being more capable in this respect than insects or reptiles, and so on. In fact, one of the most striking facts about evolution is this tendency for semiotic freedom to attain new levels of complexity and productivity (Hoffmeyer 1992, 1996).

In 1988 Claus Emmeche and I wrote together two papers analyzing different aspects of the concept of a semiotics of nature – mostly, at first, to clarify our own thoughts on the matter. Eventually, we considered the possibility of publishing these papers that obviously did not fit into the normal schemes of scientific journals. Through tortuous paths one, of the papers reached the hands of Myrdene Anderson, who offered to publish it (Hoffmeyer and Emmeche 1991) in the book she edited with floyd merrell on *Semiotic Modeling*. The other paper was submitted to the *Journal of Social and Biological Structures*, but never reached the editorial process since the journal had, unknown to us, already deceased. Tom later told me that Harvey Wheeler, the editor of this journal, had turned a couple of unpublished papers over to him, and including the paper by Emmeche and me, which then finally appeared in *Semiotica* in 1991 (Emmeche and Hoffmeyer 1991). I recollect this event as the first occasion on which we directly communicated with Thomas A. Sebeok.

I think that two things are worthwhile noticing about the course of events that finally led to the publication of these two early papers.

First, the separation between natural science and the humanities was so ingrained in our minds that it had not occurred to us, as biologists, to search the semiotic literature for precedents of reflections on the semiotics of nature; and it was thus only after having submitted the papers that we learned about Tom Sebeok's work.

4. For "... human freedom does not divert itself from that of the animals by being semiotic. The distinctive property is not *that* we are semiotic creatures but *the way*, we are so, i.e., the possession in the human species of a genuine linguistic resource for thinking and communicating that reaches far beyond the semiotic possibilities available to even the smartest of animals" (Hoffmeyer 2009: Chap. 8.)

Second, very likely we might have searched in vain for a scientific journal willing to publish those papers, and the surprising open-mindedness towards our ideas that we did ultimately encounter in the semiotic society may to a high extent reflect the efforts made by Tom for over two decades to implant biosemiotics into the recognized landscape of the discipline. In the absence of the reception we got in the semiotic society we might, I am afraid, have given up altogether pursuing the subject of the semiotics of nature any further than those two then-unpublished manuscripts.

There was one other string leading us to Sebeok's world, however, and that was a string running through the German semiotic society (Martin Krampen's 1981 work on phytosemiotics in particular), and leading further to the late Thure von Uexküll, then a professor emeritus of internal medicine at Ulm University. Tom and Thure had become friends through their collaboration in reintroducing Jakob von Uexküll's work to the English speaking world (Uexküll 1982 (1940); Uexküll 1992); and now in June 7–9 of 1990 they cooperated in establishing the first international (English-language) meeting devoted exclusively to biosemiotics. The meeting was organized by Jörg Hermann, and took place in the most beautiful Schwartswald landscape at the ReHa Klinik Glotterbad where professor Herman was, and still is, head of the medical section. But in order to attract (and/or pay for) international attendance, the Glottertal meeting was organized as a follow-up on an international workshop in Tutzing (near Munich) on "Psychoneuroimmunology in relation to cancer", a workshop that had been held under the auspices of the German cancer society (Deutsche Krebshilfe). So my first meeting with Tom in person thus took place in the context of psychoneuroimmunology.

Psychoneuroimmunology is a relatively new field in medical science, studying how the endocrine and the immunological system are involved in the semiotic activity by which the psychological situation of the organism feeds back into its somatic readiness potential. In a pioneering work from 1975, Robert Ader and Nicolas Cohen showed that changes in the immune defense in mice might be conditioned in much the same way that dogs, in Pavlov's famous experiments from the beginning of the 20th century, had been conditioned to salivate when hearing the sound of a certain bell that had previously been rung repeatedly at the time of feeding (Ader and Cohen 1975).

In Ader and Cohen's experiments, the compound cyclophosphamide⁵ was injected into mice at the same time that they were fed a solution

5. Cyclophosphamide has frequently been used in chemotherapy.

of the sweetener saccharine. Cyclophosphamide induces nausea, and it was thus not unexpected that the mice responded by developing a taste aversion against the saccharine solution. In earlier experiments, Ader and Cohen had noticed that some of the thus conditioned experimental animals quite unexpectedly died upon drinking the saccharine solution in the absence of cyclophosphamide. And since cyclophosphamide is also a strong immunodepressant, i.e., a substance that weakens the immunological response potential, Robert Ader suggested the idea that the mice were in reality dying because the saccharine solution had worked as a conditioned reflex (like the Bell in Pavlov's experiments) to elicit reduced immunological readiness in the mice. Saccharine in this way would have weakened their general resistance towards infections and some of the animals might then have succumbed to an infection. In Ader and Cohen's experiments from 1975 this idea was basically confirmed. The intake by conditioned mice of saccharine, in the absence of any injection of cyclophosphamide, evoked a significant inhibition of the immune system as measured by reduced antibody reaction in the mice toward red blood cells from sheep. The intake of the quite innocent compound saccharine was thus in the conditioned animals capable of influencing the immune system of the animals (this and many of the subsequent studies are discussed in further detail in Ader and Cohen 1993).

Many different substances, and among them the opioides, are produced by cells from the immune system and subsequently recognized by specific receptors at the surface of nerve cells. 'Endogenous opioides' are formed naturally in the body, and contribute to the pleasant – sometimes nearly euphoric – feeling experienced upon successfully executed physical or mental work. Actually, this experience is probably the reason for the strong attraction to artificial opium derivatives, such as morphine or heroine. Even animals have been shown to greedily pursue these substances and become addicted to them, which, it must be presumed, implies that the direct effect of the opioides is subcortical or, in other words, that they exert their infamous influence on the mood through brain processes that do not depend on prefrontal involvement (Panksepp 2001). On the other hand, we know that experience of positive feelings leads to a release of opioides, and a broad gate is thereby opened for the intrusion of psychological forces into the regulatory machinery of the body. Or, as Neuroscientist Antonio Damasio puts it (1994): the operation of the cerebral cortex "does not seem to work without that of biological regulation, traditionally thought to be subcortical. Nature appears to have built

the apparatus of rationality not just on top of the apparatus of biological regulation, but also from it and with it.”

PNI research still finds itself in an explorative and rather fumbling phase. Quantities of more or less binding relations between a diversity of body/brain parameters are becoming scrutinized, and yet it is too early to claim the emergence of any clear-cut pattern. Seen from a semiotic point of view, one may worry that the narrow biochemical approach that still counts as the prevailing paradigm for PNI research disallows the introduction of theoretical tools that might help PNI to transcend the tyranny of trifles. The quantity of potential relevant substances, the multiplicity of cell types, and the incalculable number of combinatorial possibilities that must be considered if the contextual outcomes of antecedent events is included in the analysis – as of course they should be – quickly leads the researcher into an overwhelming jungle of possible parameters to keep track of.

The *Krebshilfe* meeting in Tutzing was my first acquaintance with this new field of medical science, which so obviously supports and in fact *needs* the biosemiotic perspective (Hoffmeyer 1996). The meeting had attracted many of the foremost practitioners in the field from all over the world, and it was indeed very hard for the non-initiated participant, such as myself at the time – and Tom, I guess – to follow the many presentations that relied heavily on dense quantities of information presented in contexts that were never even partly explained. Tom however, as usual, swam in the water and absorbed this state of the art report of PNI research into his ever-increasing repertoire of intellectual tools for combining the web of life and semiosis.

The centrality of PNI for Tom’s whole theoretical work can hardly be underestimated, I may note, and was stated quite clearly five years earlier (1986) in *I Think I am a Verb*. “To spell out my present opinion on the relations of semiotics to the idealist movement would require a monograph”, Tom says; but he also lets us know that his personal inclination brings him to see (1986: 74–75):

“mind” as a system of signs which is, roughly, tantamount to von Uexküll’s *Umwelt*, and “brain” as a system of signs displayed, for example, as a physical network or structure of neurons. The question to be investigated is how mental manifestations of the information in the mind is transcoded into our central nervous system, and *vice versa*. The solution must come from neuroendocrinology, and, once the solution is apparent, once the information-engineering aspects are blocked out, much of what we call semiotics today, including notably linguistics, will become superfluous.

But I doubt that he, or any of us few “proto-biosemioticians” present, succeeded in persuading the PNI researchers to take a closer look on the possible advantages offered by a semiotic perspective on their field. But at least a few of the German participants did follow us to the succeeding meeting in Glotterbad – mostly, perhaps, out of respect for Thure von Uexküll’s pioneering work in psychosomatics and his leading role in bringing this field to prominence in Germany.

The Tutzing conference was thus my first meeting with the two persons who, for the next decade, came to support my efforts in developing a biologically based semiotic approach to the study of life: Thure and Tom. Nowadays, it has become customary to look up people’s pictures via the web; but in 1990 this was still not an option, and since I was a total stranger to this conference of medical doctors, I was of course curious about how to find these two men that I knew would be present. This problem was quickly solved, however, because Thure had got the good idea of putting an issue of the magazine, *OMverden*, which I was editing in Copenhagen, into his coat. The name of this magazine, *OMverden*, is Danish language for Umwelt, though not in the specific sense Thure’s father, Jakob von Uexküll, had given to this term, but rather in the straight-forward sense of “surroundings” (a literal translation to English would be “surround-world”). The main idea behind this magazine, of course, was the Uexküllian conception of humans and animals alike striving to grasp their world by means of (or perhaps through) their Umwelts (with the difference though, as succinctly pointed out by John Deely [2001, 2007], that the former knows of the difference between Welt and Umwelt, whereas the latter is unaware of any Welt beyond the Umwelt). In the cultural climate of Denmark in 1990s, however, the idea that humans like animals were suspended in an Umwelt was still in need of emphasizing. I had, of course, sent the first issue of *OMverden* magazine to Thure, who now carried it protruding from his pocket in a highly visible way as he approached the conference reception, accompanied by Tom. I still remember my relief on being warmly welcomed by these two impressive men who immediately drew me into the middle of events.

The real thing, however, still lay before us in Glottertal. The Glottertal meeting was a very decisive event because here, for the first time I suppose, was a forum consisting of people coming from a range of disciplines, crossing traditional boundaries between humanities and medical and natural science, determined to establish biosemiotics as a new field of research and also possessing the means to do so. As the title of the con-

ference, “Models and Methods in Biosemiotics”, indicates, the idea was to facilitate discussions on the broad outlines of this new field. One of the aims of this first Glottertal meeting was to establish an “International Biosemiotics Society”, and a founding meeting of this society was indeed convened on 8 June 1990. I still remember this meeting taking place in a quite solemn atmosphere, in the basement of the excellent Hotel Hirschen where we were all installed during the meeting. Present at this meeting were, in addition to Tom, Thure, and myself, Jörg Hermann from the Glotterbad Klinik and his close colleague Werner Geigges, Martin Krampen, my compatriot Claus Bahne Bahnson, a leading figure in the psychoneuroimmunology field, and the medical professors Wolfgang Schonecke and Hannes Pauli (from Switzerland).

Quoting from the original preamble:

The aim of this new society is to promote the development of biosemiotics through support of biosemiotic research and the organization of meetings to exchange relevant research results. A special concern is to ascertain and present the wide applicability of biosemiotic thought and epistemology making possible a new understanding of biological events as networks of semiotic, or sign-processes. In line with its international and interdisciplinary orientation the society will seek to bring together persons representing different theoretical orientations and different approaches to research in joint multi-, inter- or transdisciplinary research. It is the aim of such research to develop a basis for pluralistic system theoretical efforts to supercede the artificial barriers between arts and sciences through application of semiotics.

Unfortunately, nothing much came of these fine intentions. The next year, 1991, a new conference was assembled in Glottertal, and once again Jörg Hermann was the excellent organizer. The plan was to establish the International Biosemiotic Society as a registered organization, but for reasons I never learned, this final registration did not occur at this time and, unfortunately, the society was in fact never established. At the time, I must admit to not caring too much about the organizational question, since foremost in my mind rather was the intellectual pleasure of having finally found an international group capable of sharing my biosemiotic interests at a high scholarly level. I can thus only guess as to what exactly went wrong with the plans for the Society, but one problem that I felt at the time was that too much of the whole project depended on the capacity of the Glotterbad institution, and as already the title of the 1991 conference (“Biosemiotic Models – New approaches to Rehabilitation”) made clear, this dependence implied a heavy bias towards the

psychosomatic aspect of the field. The assembled medical experts of course had much to say on this. And even Tom presented a lengthy and, as always, very entertaining talk on the theme “Biosemiotics and pain”. Pain indeed was the focus of much debate at this conference, and I particularly remember an interesting talk by the anthropologist Thomas Ots persuasively showing pain to be a iatrogenic disease with a strong cultural component (e.g., people tend to locate body pains according to a national scheme). I do not believe that anybody wanted the strong medical bias to influence the prospects of our society, but obviously the Glotterbad Klinik was not geared to raise funding far outside of its own research horizon. Another problem contributing to the failure of the plan may have been the advanced age of the members of the founding group. Hermann and I definitely were the youngsters there, yet both of us were approaching fifty.

Be this as it may, an International Society for Biosemiotic Studies had to await another fifteen years to be established, in 2006, this time very much due to the energetic efforts of its newly elected vice-president, philosopher and neurolinguist Don Favareau (cf. <http://www.biosemiotics.org/index.html>).

While the early Glotterbad meetings did not achieve their organizational aims, they did much to knit together the small group of researchers sharing this – at the time – highly esoteric interest in biosemiotics. Tom, as always, was pushing, both socially and intellectually, and the excellent dinners at Gasthaus Adler or Hotel Hirschen did not, of course, lower the spirits of our group. The meeting resulted in the publication of a book assembling contributions from many of the persons that were to develop the field in the next decade (Sebeok and Umiker-Sebeok 1992). At a small dinner party after the meeting in the Uexküll home, beautifully located with a view over the German city of Freiburg, we decided to put the question of endosemiosis high on our research agenda, suggesting as a theme for next year’s conference “Semiosis crossing inside/outside boundaries”, and this, in fact, became the root of the 1993 paper on biosemiotics by Uexküll, Geigges and Hermann.

When the third Glottertal meeting was called for in 1992, however, the title was “Rehabilitation und Geriatrie” (Rehabilitation and geriatrics). I cannot find a program in English from this meeting, so maybe one was not produced. The participants and speakers that year were mostly German medical doctors, although Tom gave a talk with the title: “State of the art: ‘Tell me, where is Fancy bred’: The semiotic self”. According to the program copy, I didn’t myself present a paper – although I find that a

little hard to believe – but fortunately the biology background of our group this year was doubled by the presence of the ecologist, now professor of biosemiotics at Tartu University, Kalevi Kull, who gave a speech on “Jakob von Uexküll and the history of biology in Eastern Europe”. Kull, drawing on his collaboration with semioticians from the Tartu school, introduced fruitful new angles to our discussions.

Although these early Glottertal meetings did not, in the end, produce an international biosemiotic society, they did surely signal the birth of biosemiotics as a viable field of study, if not a discipline. And although for the next decade biosemiotics would mainly unfold its life in modesty under a diversity of umbrellas, ranging from literature and semiotics proper to evolutionary biology, it definitely did grow in maturity and authority during the 1990s, helped to no slight degree by the efforts of Tom, who not only did everything he could to initiate, promote, and publish works on biosemiotics, but was also always personally available with advice and encouragement through his legendary e-mail network. I can hardly remember ever sending him an e-mail that he would not reply to in the course of a few hours – most often, in fact, in less than 30 minutes – no matter where in the world he happened to be situated, day or night. In my plenary address for the occasion of receiving the title of Thomas A. Sebeok Fellow of the Semiotic Society of America at the 25th Annual Meeting of the society in 2000 (the fourth such), I dared prophesy that “I find it reasonable to expect that biosemiotics will slowly find its way into the very diverse garden of biological sciences. As such it will grow, we may hope, to become one strong resource for biological theorizing among others”.⁶ But I felt obliged to add that biosemiotics may never “become a conventional university-based discipline, and nor should we, as Sebeok has recently observed, perhaps want it to become one: “such formal units of knowledge production are by no means the only ones possible, let alone the most desirable, type of reputation system of work organization and control. Semiotics, and, *a fortiori*, biosemiotics, is, or should be, a field committed to producing novelty and innovations, not much else”” (Sebeok 2001; Hoffmeyer 2002).

It is a sad irony that when, finally, in 2001 I was able to invite Tom to take part in the first “Gatherings in Biosemiotics” (<http://www.zbi.ee/~uexkull/biosemiotics/gather1.htm>) taking place in Copenhagen May 2001,

6. A search on google this morning (February 27, 2007) got 72,500 hits for the word “biosemiotic”. Yet fifteen years ago no more than a few dozen persons worldwide would know anything about biosemiotics.

he was too weak to include this in his traveling program. From the beginning, the defined focus and purpose behind “Gatherings in biosemiotics” was to analyze biosemiotics in the context of biology, and after the first Copenhagen meeting annual “Gatherings” have taken place every year in an atmosphere of competent curiosity and multidisciplinary that would have appealed to Tom (for an overview see <http://www.zbi.ee/~uexkull/biosemiotics/index.html>).

The title of the present essay, “Astonishing Life”, is chosen to honor what I think was the deepest fascination energizing much of Tom’s lifelong work with sign systems of every imaginable kind. Ultimately, he believed that semiosis and life were coincident; and characteristically, he didn’t shy away from grasping the Oxford biologist Richard Dawkins’ “controversial trope” of bodies as nothing but survival-machines (for the genes in them) and then ingeniously turn it in the air to the statement that “all survival-machines are only a sign’s way of making another sign” (Sebeok 1986: 3). Pondering further on the ‘teleonomic goals’ of such sign transformations, Tom goes on to suggest that (ibid.):

the answers to such questions must be realized in terms of survival. In the short term, the process of sign-action guarantees to the subject a kind of lifelong cohesive solidarity. It maintains the identity of its semiotic self by a ceaseless rearrangement of its ego-quality (Jakob von Uexküll’s *Ich-ton*’ (Uexküll 1982 [1940]: 84), propelled by the sort of ongoing dialogue so distinctly recognized by Peirce (6.338). In the long term, semiosis, by indefinitely spawning interpretants, permeates (‘perfuses’) the universe with likenesses (i.e., icons).

Science for centuries has been aimed towards the goal of making trustworthy predictions. In principle, however, this highly esteemed goal serves too often to prevent us from being astonished. It is indeed astonishing how far this strategy for the study of nature has brought us in predictive capability, and hurrah for that. On the face of it, nothing in the natural world seems really astonishing anymore. It is, therefore, hardly surprising that young people in the West more and more tend to forsake education in the sciences. But the fact is that life is astonishing, in every true sense of this concept, and science needs somehow to restore a conception of nature as deeply astonishing. Tom’s unflinching understanding of life and semiosis as coincident points the way to a revitalization of the study of life as well as of signs.

References

- Ader, Robert, and Nicolas Cohen
1975 "Behaviorally Conditioned Immunosuppression", *Psychosomatic Medicine* 37: 333–340.
- Ader, Robert, and Nicolas Cohen
1993 "Psychoneuroimmunology: Conditioning and Stress". *Annual Review of Psychology* 44: 53–85.
- Anderson, Myrdene, and floyd merrell
1991 *On Semiotic Modeling* (Berlin: Mouton de Gruyter).
- Damasio, Antonio
1994 *Descartes' Error. Emotion, Reason, and the Human Brain* (New York, Putnam Books).
- Deely, John
2001 *Four Ages of Understanding. The First Postmodern Survey of Philosophy from Ancient Times to the Turn of the Twenty-first Century* (Toronto, Toronto University Press).
- Deely, John
2007 "The Primary Modeling System in Animals", in *La Filosofia del Linguaggio come arte dell'ascolto: sulla ricerca scientifica di Augusto Ponzio/Philosophy of Language as the art of listening: on Augusto Ponzio's scientific research*, ed. Susan Petrilli (Bari, Italy: Edizione dal Sud), 161–179.
- Emmeche, Claus, and Jesper Hoffmeyer
1991 "From Language to Nature: The Semiotic Metaphor in Biology". *Semiotica* 84(1/2): 1–42.
- Hoffmeyer, Jesper
1992 "Some Semiotic Aspects of the Psycho-Physical Relation: The Endo-Exosemiotic Boundary". in *Some Semiotic Aspects of the Psycho-Physical Relation: The Endo-Exosemiotic Boundary*. T. A. Sebeok and J. Umiker-Sebeok (Berlin, Mouton de Gruyter: 101–123).
- Hoffmeyer, Jesper
1996 *Signs of Meaning in the Universe* (Bloomington, IN, Indiana University Press).
- Hoffmeyer, Jesper
2002 "The Central Dogma: A Joke that Became Real". *Semiotica* 138(1): 1–13.
- Hoffmeyer, Jesper
2009 *Biosemiotics. An Examination into the Signs of Life and the Life of Signs* (=Approaches to Postmodernity 2; Scranton, PA: University of Scranton Press).
- Hoffmeyer, Jesper, and Claus Emmeche
1991 "Code-Duality and the Semiotics of Nature". in *On Semiotic Modeling*. M. Anderson and f. merrell (New York, Mouton de Gruyter: 117–166).

- Krampen, Martin
1981 "Phytosemiotics". *Semiotica* 36(3/4): 187–209.
- Panksepp, Jaak
2001 "The Neuro-Evolutionary Cusp Between Emotions and Cognition". *Evolution and Cognition* 7(2): 141–163.
- Sebeok, Thomas A.
1985 *Contributions to the Doctrine of Signs*, corrected 2nd printing of 1976 original with a Preface "A Global Enterprise" by John Deely (Bloomington, IN, Indiana University Press).
- Sebeok, Thomas A.
2001 "Biosemiotics. Its, Roots, Proliferation, and Prospects". *Semiotica* 134((1/4)): 61–78.
- Sebeok, Thomas A.
1963 "Communication in Animals and Men". *Language* 39: 448–466.
- Sebeok, Thomas A.
1979 *The Sign & Its Masters* (University of Texas Press).
- Sebeok, Thomas A.
1986 *I think I am a Verb. More Contributions to the Doctrine of Signs* (New York/London, Plenum Press).
- Sebeok, Thomas A, Ed.
1977 *How Animals Communicate* (Bloomington/ London, Indiana University Press).
- Sebeok, Thomas A. and J. Umiker-Sebeok, Eds.
1992 *Biosemiotics: The Semiotic Web 1991* (Berlin, Mouton de Gruyter).
- Uexküll, Jakob Von
1982 (1940) "The Theory of Meaning". *Semiotica* 42(1): 25–87.
- Uexküll, Thure Von
1992 "Introduction: The Sign Theory of Jakob von Uexküll". *Special issue of Semiotica: "Jakob on Uexküll's A Stroll through the Worlds of Animals and Men"*, Guest editor Thure von Uexküll 89(4): 279–315.
- Uexküll, Thure Von, Werner Geigges, and Jörg M. Herrmann
1993 "Endosemiosis". *Semiotica* 96(1/2): 5–52.
- Wynne-Edwards, Vero C.
1962 *Animal Dispersion in Relation to Social Behaviorur* (Edinburgh, Oliver and Boyd).

Chapter 10

Semiotics, biology, and the adaptionist theory of literature and the arts

Jørgen Dines Johansen

I

In 1979, in his masterful review article, “Prefigurments of Art,” Thomas A. Sebeok claimed, with regard to the abodes that animals build, that “If there is such a subsidiary purpose, falling passively under the sway of “mere” biological advantage, or supplementing it, an effort must be made to ferret out this aesthetic component. Such a quest is far from trivial, for, in the end, it is tantamount to asking: what is art?” (Sebeok 1979: 43). Obviously, Sebeok cannot answer this question, and neither is it possible to answer it today, but in reviewing the literature on the “aesthetic” activities of animals, he, nevertheless, cites and proposes some view points that seem most useful. Hence, I would first like to summarize some of Sebeok’s important insights, and second I would like to compare them with points made today by evolutionary psychologists and literary scholars inspired by them. It should be noticed that I do not intend to give the state of the art concerning today’s research into animal aesthetics, because my examples will be drawn from the verbal and non-verbal arts of humans, while Sebeok’s study is about a verbal, “aesthetic” activities of animals. However, just like Thomas Sebeok, I think that there is continuity between such animal activities and the artistic activities of human beings. Sebeok succinctly formulates the dilemma that we are confronted with concerning aesthetics (ibid. 30):

Over and over, we keep encountering the same pivotal aesthetic paradox: this emerges from a profound confusion about purpose; it drives us to compulsively ferret out any semblance of utility, usually defined as adaptive value. We find it difficult to conceive of art as a coherent part of animal life and can scarcely imagine it as an adornment of their leisure. All researches in this field are stamped by a tension between a deeply felt conviction on the part of many distinguished and sensitive biologists that artistic activity indeed exists in the animal world and the inability to face its presumed lack of importance, even uselessness.¹

1. In another place, Sebeok cites with approval the dilemma delineated by Charles Hartshorne (the Peirce editor) in his book on bird song. In Hartshorne’s words:

Sebeok also quotes Iredell Jenkins for pointing out “that art is at once useless and fraught with significance, purposeless and yet important” (Jenkins, in Sebeok 1979: *ibid.*). Thus, one question is the *why* of artistic activity in animals and in man. Another question concerns the *what* and the *how* of art, i.e., what kinds of activities count as art, which features characterize them, and how are they executed. With regard to the last couple of questions, Sebeok points to work related to the painting of the apes by Paul Schiller, Bernard Rensch, and Desmond Morris. They all observe, in Sebeok’s words, that such drawings and paintings show “a distinct sense of design and the ability to develop a pattern” (*ibid.* 32). According to Desmond Morris, such activities are characterized by: 1. that “the accomplishment is in and of itself rewarding” (see below); 2. they show “compositional control” by filling out a space and staying within it by means of balancing, cadenced repetition, by “steadiness–symmetry–repetition–rhythm”; 3. “calligraphic differentiation”, i.e., the progress in pictorial growth; 4. thematic variation, or as Sebeok phrases it, “invariance with allowable reformulations”. Morris adds two principles that are nothing but working hypotheses: 5. a so-called optimum of heterogeneity which governs the composition and completion of a painting; and 6. universal imagery. However, the only recurrent image seems to be a fan-like figure. Sebeok adds another principle, which he finds in Gerard Manley Hopkins (and Roman Jakobson), to those of Morris, namely “regularity or likeness tempered by irregularity or difference” or, as Hopkins also says (concerning poetry) “continuous parallelism” (*ibid.* 59–60). Finally, with Lévi-Strauss he points out the the propensity “to think in opposites and contrasts, to pry perceptual information from the environment constrained by certain predetermined structures, and to consolidate and combine these percepts in classifying, naming, and mythic systems” (*ibid.* 62).

Concerning the *why* of aesthetic activities Sebeok mentions a few likely candidates: According to Desmond Morris (in Sebeok 1979: 62), the

“To say ‘aesthetic’ is to say ‘not merely and too directly utilitarian’. But we must be careful to balance this consideration against the seemingly contradictory one that unless an aesthetic activity has some connection with utility it will be unlikely to survive evolutionary change (Hartshorne 1973: 53, quoted in Sebeok 1979: 20). Hartshorne thinks that birds with the ‘best’ songs most often have a marked territorial behavior, and he also speculates that singing may be a “sort of emergency valve for the outlet of surplus energy” (*ibid.*).

painting of the apes involves actions which are self-rewarding, i.e., they “are performed for their own sake rather than to attain some basic biological goal”. Sebeok adds, however, the gloss that to Morris “the category of self-rewarding activities is essentially biological”. In Morris’ own words: “Most of them are basically physical, meteoric outbursts and are fundamentally similar to human gymnastics and sports . . . They may inadvertently keep the animal mentally and physically healthy, and thus indirectly assist in its struggle for survival, but the actual driving force behind these self-rewarding activities appears to be simply the unleashing of surplus nervous energy” (ibid. 36).

Another candidate for the utility of artistic activity mentioned by Vygotsky is that “apparently the possibility of releasing into art powerful passions which cannot find expression in normal everyday life is the biological basis of art” (Vygotsky, in Sebeok 1979: 30). Sebeok agrees with this hypothesis, and he elaborates it as follows: “Viewed thus, art becomes a kind of cybernetic device for keeping the organisms’ *milieu intérieur*, or, to use Uexküll’s corresponding concept, *Innenwelt*, . . . in balance with its surroundings (*milieu extérieur* or *Umwelt*)”. According to Sebeok, in this sense art functions as a homeostatic device, as it does in biological systems other than the human. He points, among other things, to repair behavior, and also to activities to ameliorate what an animal has done before – among birds and spiders, for instance will weavers build improved nests in their second season. However, Vygotsky’s hypothesis also says that, in man, art creates the possibility for outlet of passions in relation to phenomena that have a special ontological status within our lifeworld, as in Aristotle, where catharsis is triggered by the plot presented in tragedies, i.e., in plays that, even if the audience might have believed that they staged true stories, nevertheless *staged* and *acted* them, and hence it is a case of role playing, of fiction.

With regard to the *why* of artistic activities, Sebeok seems, however, to be most interested in a proposal by Nicholas K. Humphrey, from whom he quotes (Humphrey, in Sebeok 1979: 41):

. . . considered as a biological phenomenon, aesthetic preferences stem from a predisposition among animals and men to seek out experiences through which they may *learn to classify* the objects in the world about them. Beautiful ‘structures’ in nature or in art are those which facilitate the task of classification by presenting evidence of ‘taxonomic’ relations between things in a way which is informative and easy to grasp.

Sebeok glosses Humphrey's idea by pointing out three further arguments in favor of it. First, he claims that if the function of categorization is the sorting out of sensory experience in order to economically identify "good, bad, and indifferent forms, or, in semiotic phrasing, to sift out the presence of such forms 'endowed with signification' that trigger appropriate long-term releasers – then the evolution of efficient classificatory techniques is bound to be of survival value" (ibid. 60–61). Sebeok also agrees with Humphrey that such an activity, like eating and having sex, "was bound to evolve to be a *source of pleasure* to the animal". (ibid.).

Second, it needs to be shown, claims Sebeok, that the discovery of what Hopkins called parallelism should be advantageous to the animal. This is, according to Sebeok, the case in fact. He sees the function of the nervous system is "to provide the creature with a local map simulating its position in the environment, to enable it to sort out [...] the images of biologically and/or socially important organisms". (ibid. 61). This is best done by arranging the images onto a *distinctive feature matrix*, and here *parallelism*, or *rhyiming* as Humphrey calls it, is the reigning principle.

Third, "to adduce instances of parallelisms in the animal world that have no demonstrable natural value but which nevertheless give people as well as the animals involved something akin to aesthetic pleasure, even when the process or the product is disunited from its proper biological context". (ibid.). And this is precisely what the studies that he is reviewing have revealed. According to him, aesthetic activities are, at one and the same time, bound up with and derived from mental processes that undeniable have survival value, namely different classificatory processes, first and foremost parallelism, that allows the organism to manoeuvre as safely as possible within its environment. However, both in animals and in man, such activities may become detached from situations involving techniques and actions for survival, and evolve into activities that are engaged in because of the pleasure they afford.

II

Thomas Sebeok's review article was published in 1979, and although, as is testified by the article itself and the studies it quotes, the relationship of biology and art was investigated at that time, the line of investigation had not yet become a major branch of aesthetic studies. This, however, changed in the nineties, when the theory of evolution, and especially evolutionary psychology, attempted to apply their hypotheses and methods of

analysis to the arts. Being myself a literary scholar, I will here concentrate on literature. I know very well that Sebeok's study is on the averbal arts, because he wanted to concentrate on what was common to animals and man, namely non-linguistic sign use. However, the principal questions asked to art and literature from the evolutionary point of view are the same, and this is why I find it permissible to use literature as an example, especially because I will also touch on the arts as well.

Let us, however, start by asking what characterizes our species and distinguishes from other ones. Obviously, there are an indefinite, but large number of answers to these two questions, but I think that the following five characteristics are important:

1. Unparalleled ability to create mental representations (models)
2. Long childhood
3. No mating seasons
4. Longevity and aging (experiencing change)
5. Cooperative action whether hierarchically organized or not

The first characteristic is, of course, decisive, because it is through such models that we experience our outer and inner worlds, the society within which we live, and interpersonal and social action; and such models are the cause of our ability to change the world, because we are able to imagine it otherwise than we find it. Since the subject of semiotics is to investigate sign actions, and because a very important part thereof is the investigation of mental representations, studying imagination is certainly important to semiotics.

The other four characteristics are important because they shape the experiences common to our species. Long childhood and longevity and aging set us apart other species, because we spend between 15% and 20% of our lifespan being taking care of and under the supervision and orders of family and other kinds of caretakers. Our longevity means, on the other hand, that we live long after that we have reproduced and taken care of our offspring. Indeed, within the last hundred years, we have, in the West, been so successful in fighting diseases and ameliorating nutrition and health to the effect that mean duration of life has grown very much. A Danish woman will, on average, die at 78. Hence she will spend about 30 years with a partner or alone, but without any or only few obligations to her children. Obviously, such facts influence, for better or worse, our general perception of human existence.

Whereas long childhood and longevity influence the relationship between generations, the lack of mating season influences the relationship between the sexes, because it, at one and the same time, allows less restricted sexual activities between different partners, but also makes possible tighter sexual and emotional bonds between long-term partners. In this way biology has, with regard to human sexuality, made a whole range of different partnerships possible. And humans have, according to resources and tradition, lived together in most of the ways chosen by the other primates: monogamy (social, sexual, and genetic), bigamy, polygamy (including polygyny, concubines, polyandry, and group marriage), same-sex partnerships, whether monogamous or serial, and the form now favored in the West: heterosexual, serial monogamy. The fact that these different relationships are options allowed within different societies, and maybe in practice, if not according to the letter of the law, all are allowed within some societies. Such diversity creates a certain tension between that which in principle is possible and the strictures of traditions and resources that affect the forms of relationships that are, in fact, contracted. However, such relationships, the desires and the difficulties connected with them, play a prominent part in literature and the arts.

Cooperative action is necessary for the survival of mankind. However, cooperation combined with man's unparalleled ability to create mental representations (models) has resulted in the division of labor, which has been a precondition for mastering nature in order to explore the natural resources to ameliorate the living conditions of humans (however, the result of this exploration is, in the long run, uncertain). Furthermore, on the one hand, the division of labor enables the cultivation of skills and talents, and the development of cultural, scientific, and technological feats, on the other hand, one consequence of this division is the strengthening of the inequality within and among societies.

These five characteristics are themselves a result of both evolution and recent historical changes, e.g. the rising of the mean duration of life, and it now the ambition of many, especially American, researchers to study literature and the arts from an anthropological and an evolutionary point of view. Ellen Dissanayake, who has written extensively on art from this position, sums up the position of the adaptationist theory of literature by saying that it: "affirms that the "adapted mind" has a definite structure – a distinctly configured set of species-typical behavioral dispositions. The common designation for that species-typical configuration – both in literary tradition and in evolutionary psychology – is 'human nature'". (Ellen Dissanayake, "Evolutionary Approaches to Literature and Drama",

2007 *Oxford Handbook of Evolutionary Psychology*). She continues by adding what adaptionist literary theory is sharply opposed to:

Adaptionist literary theorists have rejected both the irrationalism of post-modernism and the blank slate model of human behavior that informs standard social science. They affirm the ideas of “truth” and “reality,” and they think that in studying the products of human imagination, truth and reality can be most adequately served by an adaptionist understanding of human nature.

Obviously, this position makes this theory controversial in some quarters. In my opinion, however, it constitutes a much needed corrective to the relativistic attitude that still is widely popular within cultural and other kinds of humanistic studies. The adaptionist theory of literature and the arts claims that decorations of human artefacts that are apparently without function are found worldwide, and not only artefacts are embellished, the human body and hair are decorated as well. Norms and ideals of human beauty, and sexual attraction, are operative everywhere. And they are, in certain respects, surprisingly similar: Symmetry with regard to face and body for both sexes, and waist-to hip-ratio: 0.70 in women, is most attractive to men – and to women themselves. According to evolutionary psychology, such features indicate health and fertility.

Furthermore, in addition to the visual embellishment of artefacts and the human body, we have: the poetic-rhetorical use of language: *poetry*; the rhythmical and ritualized movement of the individual body and groups of bodies: *dance*; melody and rhythm: *music* the combination of language and music in *singing*, which Sebeok quotes Boas for claiming is universal. And poetry, singing, dance, and music are everywhere part of the performing of rituals and ceremonies, sacred as well as profane.

However, even if aesthetics is a universal, the adaptionist theory of literature and the arts claims it is a human universal. Meaning aesthetics has not existed forever (however, as shown in section I, Thomas Sebeok has pointed to prefigurements of art in animals). It seems that a creative explosion took place about 30.000 years ago (cave paintings, Venus figurines, etc.). This explosion was probably due to the development of the brain that has made both iconic and symbolic representation (e.g. language, although others think that language is much older) possible.

According to Ellen Dissanayake, and innumerable others, the following features are central to both to ritual and to art and literature. They both

1. Work with stylization and formalization
2. Are put within parentheses with regard to daily life
3. Are more and less real than daily life
4. Use symbols to solidify norms
5. Further communal action
6. And, hence, social integration
7. Seem to explain the ineffable
8. Make the unbearable bearable

The first point may be further specified. According to Ellen Dissanayake, art behavior consists in attempting to make something, an art object, special (see Dissanayake 1992: 39–63). Making something special is, according to her (and very many others, because what she lists are standard poetic and rhetorical devices), achieved by means of the following procedures: beautification/idealization, exaggeration, creation of patterns, combination, imposing form, transformation, uniting the perceptual with the emotional and the cognitive, and likewise what is physically, sensually, and emotionally pleasurable and enjoyable. To what is pleasant to the senses is added that which is agreeable to man's cognitive capacities, such as: repetition, patterning (they both also appeal to the senses), connection and coherence, clarity, artfulness/ingeniousness, composing and making variations on a theme, contrast, balance, proportion, mastery. It goes without saying that the features mentioned here are precisely those studied by the semiotics of art and literature.

With regard to art behavior, it is not only a question of making special; such activity also includes an intention to appeal to, and maybe satisfy other persons' understanding and appreciation of an object that is distinguished from other objects with regards to its function and use, but also with regard to features that transcend what is necessary for functional reasons.

Originally, Dissanayake claims, making special was necessary and useful, because what was forced upon man and necessary to accomplice, was, by being made special, transformed into something worth desiring, and consequently into something that was voluntarily done. Making special may mean making beautiful, but it may also mean making strange, monstrous, appalling, or extravagant. The three ways of making something strange – namely, through play, ritual, or art – seems to imply a general ability to produce and express what is special; and this ability has, from an evolutionary perspective, according to Dissanayake, an

adaptive function. And what was made special was related to what was considered to be decisively important events and transitions, such as birth, puberty, marriage, and death, to discover food and procure sufficient supplies, to secure the fertility of the soil and that of women, to cure the sick, to go to war, or to solve conflicts.

The arts are necessary in order to have distinguishing rituals and ceremonies from everyday life, because distinction and novelty, body movements synchronized with those of others, order, pattern, and colors are already basic animal pleasures, and it is from such important elements of life that the arts originate. Rituals and ceremonies offer a program, or blueprint, that, when one is guided by it, structures, articulates and gives outlet for *emotions*. According to Ellen Dissanayake, art has the same effect: it too offers to form the *emotions* of the audience by manipulating them in certain ways – for example, through expansion, contraction, rousing, calming down, omitting, etc. Both rituals and the arts are, in a certain sense *compulsive*. They are good at rousing, catching, and securing the attention of an audience. Both intend to influence the emotions of the audience, and both are intentionally making themselves *extraordinary* and *special* by using means such as *archaic and poetic language, singing or chanting, music, and formal body movements*, in addition to all the poetic devices mentioned above.

But what is the utility of literature and the arts? Within adaptionist aesthetics, there are three positions. Literature and the arts are:

1. exploring psychological mechanisms that evolved for other purposes, i.e. side-effects or by-products of other adaptive mechanisms,
2. indirectly adaptive, they can be made to contribute to other adaptively useful activities,
3. fulfill adaptive functions that could be fulfilled by no other functions.

Dissanayake exemplifies the utility of the different arts as follows: 1. Singing and rhythm aids cooperative work; 2. Music makes boring tasks bearable; 3. Pictures teach and communicate information; 4. Dance is both a means of [a] self-advertisement (attracting mates), [b] a way of ensuring social interaction and group formation, and [c] recreational; 5. Literature teaches about outer and inner nature, about society, and about truth, norms, and values. Let us go a little deeper into storytelling and literature.

III

According to Michelle Scalise Sugyama (2001), being able to tell stories has the following the following decisive reproductive advantage over those who are not able to do so: storytelling lessens the need for firsthand information acquisition, which may be time consuming and dangerous. Listening to stories demands little energy. It means a reduction of the consumption of time and the condensation of information. It involves normally no risks, and it makes it possible to learn and to profit from the experiences of others, and to tailor information to a specific audience.

Obviously, narration transcends the borderline between fiction and non-fiction, and thus we still have to pose the question concerning the possible advantage of the telling of fictional stories. I can see the following six advantages of telling fictional stories, compared to exclusively relating what are claimed to be true stories:

1. allows the storyteller to tailor information to the needs of senders and receivers even better than in factual stories;
2. allows unification of the particular with the general, thus informing about the human condition by relating an individual case (tellers of true stories are, in principle, stuck with the particular);
3. allows enhancement of the morality of the texts, by fitting the plot solutions to values and norms of the society in question (e.g. poetic justice);
4. allows creation of and tell narratives that make the universe meaningful;
5. allows invention of stories that are related to the practices within the lifeworld of the group, but magnified and made exciting (e.g., myths);
6. allows fashioning universes that satisfy the needs and desires of the audience (even against all probability, as in folktales).

In addition to such considerable advantages, it should also be remembered that both narration and fiction are not foreign to the way in which our mind/brain function. On the contrary, they are related to mechanisms that are part of our innate mental capacities.

Our species spontaneously produces mental processes that are recognized as fictional – dreams. Grown-up dreamers, when they wake up, most often immediately recognize that dreams are figments of their own minds, consisting of small scenarios and narratives that, in direct or indirect ways, are related to the experiences of the dreamers. Hence, we are involuntarily fiction producers. Dreaming, then, is one source of literature that is innate.

Whether dreams are, as Freud thought, wish fulfilments is hotly debated. Here, however, the important point is that dreams are primarily visual representations of scenarios and events that are familiar, because they are related to and relate what is intimately connected with the everyday life of the dreamer, and maybe with his or her problems. Dreams are also strange and bizarre, as well; because the dreaming mind changes and rearranges the universe as it is known to us when we are awake. Since we, according to dream researchers, if we sleep eight hours, spend about one and a half hours dreaming (five times 20 minutes), it is an activity that recurs all throughout our lives. It is also interesting that the cause of the often marked strangeness of dreams is that the dreaming mind makes characters, scenarios, and plots strange involuntarily, outside of the control of the dreamer, by applying all the standard poetic devices that were mentioned above.

Another source of literature is clearly cognitive and constructive: the human mind's ability to *generalize and predict*. The step from predicting what is going to happen next in our experiential world to imagining a fictional world is small, and it is a step that everybody takes in early childhood. As soon as children are able to speak they report that they are imagining things to be otherwise than they in fact are, and the children know this difference.

Playing, which often involves hypothesis-making, is another source of literature and the arts. And playing is not only an anthropological universal. It is known in other species. Indeed, according to neurologist Jaak Panksepp, all mammals play. Furthermore playing seems to be triggered by "spontaneous neural urges within the brain" (Panksepp 1998: 281). It also seems that playing, especially rough-and-tumble play, releases endorphins, and thus playing seems to be its own reward. However, in childhood its usefulness is not apparent. Most often it takes place in a space of its own, appropriated for this purpose. And it is carried out for the fun of it, and for the endorphins, not for its immediate usefulness.

The apparent absence of evolutionary purpose in play and the arts is a problem for ethology. However, play seems to help to train the young ones to become able later to master the tasks of grown ups: finding food, defending one self and others, mating, and, in addition to these competences, play also seems to be instrumental in the acquisition of social abilities.

Some kinds of playing also involve a kind of hypothesis making. Symbolic play, for instance, combines two procedures that are also characteristic of both dreams and literature, namely, *narrativization* and

metaphorization. Very often the young child pretends to be somebody else, or the environment is treated as a metaphor in the sense that furniture, for instance, is interpreted as representing something different, chairs may represent boats, the carpet may represent the ocean, etc.

In addition to symbolic play, there will be playing governed *by rules*, and playing that consists in *construction models* of existing or of imaginary objects. Hence playing may not only be seen as wish fulfilments in fantasy (although some kinds of playing clearly involve this); it also seems to have a preparatory function, and it often fulfils the needs for practice, socialization, relaxation, and for handling conflicts and defeats that the child has experienced in the interaction with others. In play, the outcome of such troubling events will often be contrary to what really happened. Instead of being a victim, or giving in to avoid conflict, in play, the child will often be victorious.

Daydreaming is akin to playing. It is the creation, in idle motion, of scenarios and narratives that are related to the wishes and fears of the daydreamer, and such dreams are clearly fictional. Daydreaming is certainly very far from writing literature (for one thing, because daydreams are mostly visual, while literature rests on the struggle with language); but, nevertheless, they share the active use of the imagination.

Obviously, literature uses procedures quite similar to what happens in dreaming, hypothesizing, daydreaming, and in the three kinds of playing mentioned here – symbolic play, rule play, and construction games – because it creates symbolic structures on top of the literal fictional world (metaphors and allegories); because it abides by rules that are either imposed by tradition or self-imposed; and because a literary universe is a prime example of world making, a complicated construction game.

From the point of view of the producer of fiction, making experiments upon imagined states of affairs may be beneficial in several respects.

First, in fabricating fictional universes, the author gives himself the possibility of living parallel lives, i.e., he overcomes, in a certain sense at least, the limitations to experiencing and acting that his bodily existence imposes upon him. In doing so, the author may not only fashion a set of fictional identities for himself, he may also receive emotional and intellectual satisfaction in the company of his characters.

Second, there is the pleasure linked with being in control, because, with regard to the creatures of our own minds, we are both omniscient and omnipotent. We literally decide about the fate, indeed about the life and death, of our fictional beings. Hence, there is certainly a narcissistic gratification and fulfilment bound up with being an author. Third, in creating a

fictional universe, its producer very often makes concrete and exemplifies a state of affairs or a course of events that are supposed to be typical of us as species and/or as historical beings.

The modelling-function of literary fiction highlights literature's mimetic, representative and cognitive aspects. It explains, at least partly, why one would turn to literature for instruction about relationships in the experiential world, because it exemplifies typical scenarios and scripts. However, the main attraction is that what is considered typical is embodied in the actions of characters that have a local habitation, and a name – and a fate too.

In order to understand and relate to the fictional universe pointed out by the text, readers must use their own mental resources to access it. This means that they must also invest their general knowledge of the ways of the universe the fictional character inhabits, including their likes and dislikes, fears and desires, and values and norms. However, in doing so the reader personally fleshes out the text's instructions about how to imagine its universe and relate to its characters, and/or to its narrators and implied author.

And, like the author, the reader may, in relation to the texts, both create parallel lives by identifying with one or more of the characters or with narrators, and hence, like the author, he may also receive emotional and intellectual satisfaction in the company of the characters, and the bond between reader and text may be very strong and emotional.

Let us, however, return once more to the question that, while it seems very sensible to inform about and share what has in fact happened, why, one might ask, are we eager to share what hasn't happened, something that is nothing but a figment of somebody's imagination?

First, we are programmed by evolution to produce virtual universes in dreaming, in playing, in hypothesizing about the future, and in daydreaming. And some of these activities are already public activities.

Second, the production of fictional universes allows us not only to project future changes onto present states of affairs, but also to change the initial conditions – among other things, the nature and the ontological status of the agents. Both author and reader are related to fictional beings in a double and contradictory way. On the one hand, the emotional systems of both author and reader may become alerted by and linked with the fictional characters and their fates: and the feeling of thrill, and despair or joy, is valid. On the other hand, however, letting disasters happen to fictional beings, or just to be an onlooker, is still somehow like shooting carbon ducks in a gallery.

The existence of virtual (here, fictional) worlds in addition to our experiential world makes the latter world virtual in the sense that it points to the fact that the actual situation might have been otherwise. In this way we are able to evaluate our actual life counterfactually; and counterfactual imagining questions the present state of affairs, and testifies to the possibility of another outcome of a given situation. Hence, imaginary world creation is per se a challenge to reality; reality loses something of its necessity, because things might have turned otherwise. The advantages of fiction making may be summarized as follows:

1. Creating virtual/fictional worlds allows people, in their imagination, to experience what would otherwise be impossible, dangerous, despicable, etc. Hence, such activities may be gratifying by adding a set of wish-worlds to the world we inhabit just because our bodies reside within it.
2. However, creating virtual/fictional worlds does not only satisfy our desires and thrills; it also allows experimentation and model creation, mentally and/or externally, and such alternative versions of parts of our lives, of our interaction, and our action on nature, may not only be consummated individually, they may be communicated.
3. By being communicated, such models may create a common ground that can be shared among the members of a group/society, and hence they may facilitate social integration and communal action.
4. Furthermore, representations of virtual, including counterfactual, scenarios may question existing states of affairs and social relationships, norms, and values.
5. Visions embodied in works of art and literature may attempt to provide answers to questions that are existentially relevant to society and its members.
6. Hence, works of art and literature may either help to strengthen norms, or it may suggest alternative ones

Fiction, then, is simultaneously real virtual existence and virtually real existence: it is mental reality and it may become social reality.

IV

I think that the last twenty-five years or so have very much showed that Thomas Sebeok's support to Humphrey's idea (in Sebeok 1979: 41) that

“Beautiful ‘structures’ in nature or in art are those which facilitate the task of classification by presenting evidence of ‘taxonomic’ relations between things in a way which is informative and easy to grasp” was not only sound but prescient. Humphrey is in agreement with very many of the hypotheses and points of view of the contemporary adaptionist approach to literature and the arts. And because of such agreement, it is fair to say that Thomas Sebeok in these matters was in advance of his age. And the same is true concerning the limitations of and difficulties faced by the study of literature and the arts from a biological and adaptionist point of view.

Already in 1979 Sebeok warned that “to provide an explanation for the underlying sensory or neural basis for preferences that are termed aesthetic remains generally a difficult research problem for the future” (1979: 43). Indeed he was right. Only now questions concerning these bases are beginning to be investigated.

References

- Boas, Franz
1927 *Primitive art* (New York: Dover, 1955 reprint).
- Dissanayake, Ellen
1992 *Homo Aestheticus. Where Art Comes From and Why* (Seattle: University of Washington Press).
- Dissanayake, Ellen
2007 “Evolutionary Approaches to Literature and Drama”, in *The Oxford Handbook of Evolutionary Psychology*, ed. Robin Dunbar and Louise Barrett.
- Hartshorne, Charles
1973 *Born to Sing: An Interpretation and World Survey of Bird Song* (Bloomington: Indiana University Press).
- Hopkins, Gerald Manley
1959 *The Journals and Papers of Gerald Manley Hopkins*, ed. By House, Humphry and Graham, Storey (London: Oxford University Press).
- Humphrey, Nicholas K.
1971 “Colour and Brightness Preferences in Monkeys”, *Nature*, 229, 615–17.
- Humphrey, Nicholas K.
1972 “Interest and Pleasure: Two Determinants of a Monkey’s Visual Preference”, *Perception* 1, 395–416.
- Humphrey, Nicholas K.
1973 “The Illusion of Beauty”, *Perception* 2, 429–39.

- Jakobson, Roman
1966 "Grammatical Parallelism and Its Russian Facet", *Language* 42, 399–429.
- Jenkins, Iredell
1958 *Art and the Human Enterprise* (Cambridge: Harvard University Press).
- Lévi-Strauss, Claude
1964 *Le cru et le cuit* (Paris: Plon).
- Morris, Desmond Morris
1962 *The Biology of Art: A Study of the Picture-Making Behavior of the Great Apes and Its Relationship to Human Art* (New York: Alfred A. Knopf).
- Rensch, Bernhard
1972 *Homo Sapiens from Man to Demigod* (New York: Columbia University Press).
- Rensch, Bernhard
1976 "Basic Aesthetic Principles in Man and Animal", in *The Nature of Human Behaviour*, ed. Günter Altner (London: Allen & Unwin), 322–345, 445–447.
- Panksepp, Jaak
1998 *Affective Neuroscience. The Foundations of Human and Animal Emotions* (=Series in affective science 6; London: Oxford University Press).
- Schiller, Paul
1951 "Figural Preferences in the Drawings of a Chimpanzee", *Journal of Comparative Physiological Psychology* 44, 101–11.
- Sebeok, Thomas Albert
1979 "Precognitions of Art". In *Semiotica*, vol. 27–1/3, 3–73.
- Sugiyama, Michelle Scalise
2001 "Narrative Theory and Function: Why Evolution Matters", *Philosophy and Literature*, 25, 233–250.
- Vygotsky, Lev Semenivich
1971 *The Psychology of Art* (Cambridge: MIT Press).

Chapter 11

The architect of biosemiotics: Thomas A. Sebeok and biology

Kalevi Kull

“The life science and the sign science at their conjunction commingle so multiformly, so abundantly ramified, that even a sampling of such conjunctures in this brief paper risks rendering a disservice to the readership.”

— T. A. Sebeok 2000c: 83

Bloomington, Tartu, the world

Semiotics, although having no real beginning,¹ made a leap towards the fundamental and widely recognized general theory in the early 1960s, when three scholars, who became the major designers of the doctrine in the second half of the 20th century, almost simultaneously wrote their first works that used this term – semiotics – and directly addressed the major semiotic problems. These scholars were Thomas A. Sebeok in Bloomington, Juri Lotman in Tartu, and Umberto Eco in Bologna. It is no less interesting to learn that all the three were independently influenced by one man – Roman Jakobson. As Sebeok (1991b: 95) confessed, “I came to semiotics [...] first through Ogden and Richards, then through Charles Morris, and then, of course, the main influence in my life was Roman Jakobson”.

My guess is that, in a hidden way, via Jakobson, the three designers of semiotics accepted a form of semiotic reasoning which was not only open, but after a while required a semiotics that would include not only culture, but all life. Sebeok, obviously, understood this first, but the turn towards an organic concept of semiosphere by Lotman in 1982, and the emphasis on the semiotic study of primary cognitive processes by Eco, may con-

1. See Kull, Salupere, Torop 2009: “Semiotics has no beginning”, Introduction to the *Tartu Semiotics Library* 4.2 volume.

firm this statement quite clearly. Some seeds for this semiotic move to biology – towards biology of a special kind, extended general biology – may have been sown by Jakobson, “the main ‘catalyst’ in the contemporary semiotics movement” (Sebeok 1997: xiii).² This was not only because of his linkage to Peirce, communication theory, and cybernetics, but also because his linguistics that was rooted in the biology of Karl Ernst von Baer and Lev Berg.³ These suppositions for the coming bio-semiotics may be worth keeping in mind.

Signs by Sebeok (1994; 2001e) – a book that was composed as an introductory manual for semiotics – demonstrates a main attempt and achievement of Sebeok’s research program for general semiotics: to bring together Juri Lotman’s semiotics as a study of modelling systems with Jakob von Uexküll’s *Umweltlehre*. Both scholars, Uexküll and Lotman, were related to the University of Tartu (Sebeok 1998).

Biosemiotic meetings in Glottertal (Germany) that Thure von Uexküll and Sebeok, together with Jörg Herrmann, organised in the early 1990s, brought together a Copenhagen–Tartu squad that has since developed Sebeok’s biosemiotic research program, establishing the international annual “Gatherings in Biosemiotics” from 2001 onwards, and several joint studies, with many excellent scholars joining the field, afterwards.⁴

Tom Sebeok’s connection with Tartu continues after his death. On December 21, 2001, he died in Bloomington (Indiana, USA), the city where he lived and worked most of his life.⁵ Since December 2007, Thomas A. Sebeok’s memorial library, which includes his complete personal collection of biological and biosemiotic books, makes a distinguished part of the semiotic library in the Department of semiotics of the University of Tartu (Fig. 11.1).

2. See also Eco 1987.

3. Seriot 2003.

4. The Glottertal meeting in 1992 was also the one where I first met Thomas Sebeok. After that we had a chance to meet many times – in Tartu (1997, 1999), in Imatra (1998, 1999, 2000), in Toronto (1997), in Siena (1998), in Dresden (2000), in Bloomington (1999). I was particularly glad to make a two-week visit to Bloomington in 1999, where I spent many hours every day together with Tom at his home office and could work through many tens of meters of Tom’s bookshelves.

5. He was born on November 9, 1920, in Budapest, Hungary.

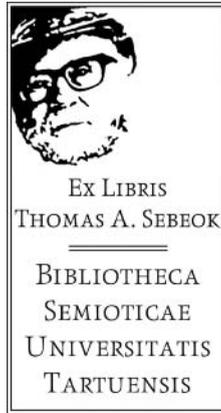


Figure 11.1 *Ex libris* that marks the books of the Sebeok memorial library in Tartu.

Being minded about the mind: Colleagues about the teacher

There exist numerous writings about Thomas Sebeok. These include large collective *estschriften* dedicated to him (Bouissac *et al.* 1986; Bernard *et al.* 1993; Tasca 1995; Tarasti 2000; Danesi ed. 2001). A good minimal account of him has been collected in an obituary by Jeff Bernard (2002), in addition to other obituaries (Anderson 2003b; Brier 2003; Hoffmeyer 2002; Kull *et al.* 2002; Petrilli 2002; etc.). There are numerous writings both from Sebeok's lifetime (Baer 1987; Deely 1995; 1998; Danesi 1998; 2000; 2001; Nuessel 2000; Petrilli and Ponzio 2001; Ponzio and Petrilli 2002; Uexküll 1986; etc.), and after this (e.g., Deely 2003; 2004; 2005; Petrilli and Ponzio 2008; etc.). Some interviews have been published (Randviir 1997; Shintani 2001; etc.). Almost all of these, at least to some extent, mention Sebeok's work in relation to biology.

As Eugen Baer has said (1987: 182), "the point of departure for Sebeok's doctrine of signs is found in biology". Winfried Nöth's *Handbook of Semiotics* adds that (2000: 42–43) "the establishment and development of zoosemiotics, biosemiotics, and evolutionary semiotics as new branches of semiotics in broadening anthroposemiotics are all connected with T. A. Sebeok's name". The work and impact of Thomas A. Sebeok on the development of biosemiotics will require a special volume, because studying his works will be a necessary part of education for everybody who wants to inquire into the semiotic basis of life science. This makes it

necessary to try to review his directly biological work, and to begin with this is the aim of the current essay.⁶ And since, for Sebeok, scholarly research was always intertwined with developing the web between scholars, this aspect will also be reflected here.

Thus, on one hand, this paper unintentionally belongs to a series of studies that we have planned together with Tom Sebeok about the classical figures whose work has been important for the formation and development of biosemiotics, or semiotic biology.⁷ On the other hand, I want to stress here that Sebeok's work described below is about the foundations of biology, which is more than an application of a semiotic approach in certain aspects of biology or an analysis of biological aspects of semiotics. It is an extension of biology beyond the natural science, beyond a subjectless biology. This is a biology that can deal with phenomena of recognition, categorization, communication, representation, and meaning. This is a special kind of biology, richer than the one built according to the rules of the methodology of natural science. Actually, it is an evident step that had to be taken anyway, in order to understand life and not just to describe it. And this is important not only for biology. In Paul Cobley's words (2008: 204), "if you are not at least a *dilettante* in biosemiotics, then you will remain no more than a *dilettante* in contemporary semiotics".

Synopsis

A brief list of Sebeok's foundational work in biosemiotics (i.e., in the context of semiotic biology) includes at least the following points.

-
6. An earlier version of this paper was Kull 2003.
 7. This series already includes publications on semiotic classics in their relationship to biology – *exempli gratia*, on Charles S. Peirce (Santaella 1999), Charles Morris (Petrilli 1999b), Roman Jakobson (Shintani 1999), Juri Lotman (Kull 1999b), Victoria Welby (Petrilli 1999a), as well as on biologists and others who have made a remarkable impact for biosemiotics – Jakob von Uexküll (Kull 2001), Giorgio Prodi (Cimatti 2000), Heini Hediger (Turovski 2000; Sebeok 2001b; see a review of the latter in Carmeli 2002), Friedrich S. Rothschild (Kull 1999c; see also Anderson 2003a), Gregory Bateson (Hoffmeyer ed. 2008; Brauckmann, 2000), George E. Hutchinson (Anderson 2000).

- (a) *Establishing a comparative semiotics*. Much of Sebeok's effort has been concentrated on one central question: "whether a truly comparative science of signs is possible" (Sebeok 1972: 1). This orientation has evidently influenced the way he formulated the research questions when studying the semiosis of organisms.⁸
- (b) *Establishing zoosemiotics*. Sebeok is the author of the term 'zoosemiotics' (from 1963), and he has published widely on the problems of animal communication. This includes the compiling of a zoosemiotic bibliography (Sebeok 1969), numerous papers and books in the field (Sebeok 1963, 1969, 1972, 1990), and the editing of large volumes of collective works on zoosemiotics (Sebeok 1968; 1977; Sebeok; Ramsay 1969; Sebeok, Umiker-Sebeok 1980; Sebeok, Rosenthal 1981).
- (c) *Introducing the works of Jakob von Uexküll to semiotics* (for an overview of this, see Kull 2001).
- (d) *Analysing the basic sign types in their applicability and use by non-human organisms* (e.g., Sebeok 1977; 1991a).
- (e) *Introducing the endosemiotic sphere – signs in the body – as different from zoosemiotics* (Sebeok 1976).
- (f) *Analysing the concept of biosemiotic self* (Sebeok 1992).
- (g) *Discussing Lotman's typology of sign systems*, and arguing for the existence of primary modelling systems as those of the pre-linguistic or non-verbal levels; then, the linguistic modelling systems will be the secondary ones (Sebeok 1994, 1996b).
- (h) *Discussing Lotman's concept of semiosphere*, and arguing for the inclusion of non-human sign systems into it (Sebeok 2000a); i.e., broadening the scope of semiotics to include the biosphere (Sebeok 2002).
- (i) *Introducing the methods of semiotic analysis for biosemiotic systems* (Sebeok, Danesi 2000).
- (j) *Organising, supporting, and editing several collective works on biosemiotics* (e.g., Sebeok, Umiker-Sebeok, 1992).
- (k) *Working on the history of biosemiotics*. This includes particularly his writings about Jakob von Uexküll (1864–1944) (Sebeok 1977; 1998), Heini Hediger (1908–1992) (Sebeok 2001b), and his framing of the history of biosemiotics in general (Sebeok 1996a; 1999a; 2001a).

These points will be taken up in more detail below.

8. The comparative approach in biology, as based on typological methodology, was not included in the mainstream neo-darwinian biology of 1960s, 1970s and 1980s, which was indeed hostile to the methodology in question. This is why Sebeok's approach could not find much support from biology of his time.

Zoosemiotics

Sebeok's biology-teachers⁹ in the University of Chicago were two remarkable personalities – Joseph J. Schwab (1909–1988), and Ralph W. Gerard (1900–1974). Both were interdisciplinary scholars. Schwab, to whom Sebeok dedicated his *Perspectives in Zoosemiotics* (1972), was a geneticist of wide interests. Among the topics of Schwab's writings was, for instance, the problem of eros and education.¹⁰ Gerard was a behavioral biologist and neurophysiologist with an interest in general systems theory.¹¹

Sebeok started his professional career and scientific work as a Finno-Ugric linguist, coming from Hungary.¹² Among his major teachers in general linguistics were the semioticians Charles Morris in Chicago and Roman Jakobson at Princeton.¹³ Trying to trace the signs of Sebeok's movement towards biology, one can mark his early interest in general and interdisciplinary problems. For instance, his paper together with Giuliano Bonfante (Bonfante and Sebeok 1944) argued for the applicability in linguistics of the 'age and area' hypothesis (or Willis' rule, according to English plant geographer John Christopher Willis, who has described this rule in his book of 1922), which had originally been formulated as a purely biological rule (of course, with interesting exceptions). After 1954, Sebeok also wrote on psycholinguistics and non-verbal communication, where some of his zoological interests are seemingly rooted;¹⁴ but the first appearance of a directly zoological topic dates only to 1962 (Sebeok 1962).¹⁵ Since then, animal communication has become a frequent topic

9. I would assume that the term 'teacher' should be restricted to those who could communicate with the pupil not only verbally, but also via non-verbal means of communication – which means they had to be alive.

10. Bibliography of J. J. Schwab is published in *Interchange* 20(2): 116–118 (1989). See also Schwab 1941.

11. Sebeok's remarks on Gerard – see Sebeok 1972: 3–4.

12. Interestingly, among Sebeok's close collaborators in Bloomington were two Estonian professors – a linguist Alo Raun (1905–2004), and a folklorist Felix Oinas (1911–2004).

13. Both are also mentioned by Sebeok (2001c: 3) as directing the attention of semiotics towards biology.

14. About this first period of research, see his own description in Sebeok 1986: ix . . . xi, 65; 1995. Cf. Baer 1987: 181.

15. Deely Ed. 1995 is a comprehensive bibliography of Sebeok's writings of 1942–1995.

of his publications (Sebeok 1963, 1965a, 1968). Most of Sebeok's publications in the field from this first decade have been included in his book, *Perspectives in Zoosemiotics* (Sebeok 1972).

At first, his interest turned to the study of codes in animal communication (Sebeok 1962, 1965c). According to his definition, "by code is meant everything that the source and the receiver know *a priori* about the message" (Sebeok 1972: 9). Therein, one of the questions he paid attention to was the relationship between analog and digital coding.¹⁶ Sebeok developed "the hypothesis that whereas subhuman species communicate by signs that appear to be most often coded analogically, in speech [...] some information is coded [analogically] and other information is coded digitally" (Sebeok 1972: 10; 1963: 460). Sebeok's interest clearly reflects the general influence that the developing fields of cybernetics and information theory had on linguistics of that period. These interests, altogether, led to interdisciplinary communication studies in animals and men.¹⁷

About the same time when zoology started to be his field he also entered the field of semiotics.¹⁸ The remarkable fact that these turns were closely related for Sebeok clearly helps in understanding his thinking.

Quite soon after that, he started to use the term 'zoosemiotics' (Sebeok, 1965b). Most probably, this term was first coined by him. He wrote (Sebeok 1963: 465):

The term *zoosemiotics* – constructed in an exchange between Rulon Wells and me – is proposed for the discipline, within which the science of signs intersects with ethology, devoted to the scientific study of signalling behavior in and across animal species.¹⁹

16. It is interesting to mention in this respect that one of the first semiotic works of Danish biosemioticians Jesper Hoffmeyer and Claus Emmeche (1991) was devoted to the same problem.

17. An expression by Hans Kalmus (1906–1989) may illustrate this (Kalmus 1950: 22): "Nevertheless no organism, solitary or social, is conceivable, which has not grown up under the control of a well-integrated communication system, the element of which are the genes". (See also Kalmus 1962.)

18. "By 1962, I had edged my way into animal communication studies. Two years after that, I first whiffled through what Gavin Ewart evocatively called 'the tulgey wood of semiotics'" (Sebeok 1986: ix).

19. A detailed story can be found in the chapter "The word 'zoosemiotics'" in Sebeok 1972: 178–181.



Figure 11.2. Tom Sebeok with his books, at home, 1999. (Photo by K. Kull.)

He began to pay attention to the relationship between ethology and semiotics. He held a view that ethology and zoosemiotics belong together. At one point (Sebeok 2001c: 76) he stated that “an animal’s ethogram is equivalent to its semiogram”. He tried to review the field of animal communication research, compiling a bibliography of the field and publishing it in several versions (Sebeok 1969: 210–231; 1972: 134–161). He could indeed collect an amazingly rich library on animal communication studies (Fig. 11.2).

In 1977, Sebeok published a 1128-page collection of studies about animal communication (Sebeok ed. 1977). This included chapters on ontogeny and phylogeny of communication, on communication mechanisms based on different modalities of perception, and overviews of communication in many taxonomical groups of animals – altogether 38 chapters written by the leading specialists in the field. He dedicated the volume to Heini Hediger.

Sebeok provides many examples of sign use in animals, and classifies them on the basis of sign types. He tends to claim that the decisive role in animal behaviour belongs to indexical signs: “The survival of all species, and of each individual member of every species, depends on the correct decipherment of indexical signs ceaselessly barraging their *umwelt*” (Sebeok 1997b: 282). Or, on another occasion (Sebeok 2001c: 80):

[...] *behavior* is, in semiotic jargon, an indexical sign pointing toward its interpretant, viz., another sign, which in its turn is empowered to encode effects of the environment onto its receptors into still further signs, or, in short, to attribute meaning.

Then, he enters into a discussion on the existence of language in animals, denying it on the basis of an analysis of the example of Wilhelm von Osten's trained horse Kluge Hans, which was studied already by Oskar Pfungst (Sebeok 1980; Umiker-Sebeok and Sebeok 1980; Sebeok and Rosenthal 1981).²⁰ This period coincided with an intensified work on teaching language to human apes, and Sebeok began to be strongly critical toward these approaches which were blind to the categorical difference between language and animal communication.²¹

Sebeok's position in using the term 'language' was very clear: "Expressions such as 'language of the bees', even when used with the authority of a Nobel Laureate, Karl von Frisch, are metaphors"; "picturesque combinations of the word 'language' with the generic word 'animal' [...] ape or dolphin, or a category of domestic pets (cat, dog), or in phrases like 'the language of flowers', are unscientific nonsense, examples of *petitio principii*" (Sebeok 1996b: 105–106). Another statement defines the difference (Sebeok 1996b: 106):

All the animals paleontologists classify generically as *Homo*, and only such, embody, in addition to a primary modelling system [...], a secondary modelling system, equivalent to a natural language. The difference amounts to this: while the Umwelten of other animals model solely a (for each) 'existent world', man can, by means of the secondary system, also model a potentially limitless variety of 'possible worlds' (containing sentences with alethic, deontic, or epistemic modalities).

Despite the great influence Sebeok's works have had on the study of semiotics of animal communication (and on linguistics and biology – see, e.g., Smith 1974; Ruse 1998), the responses he personally received from

20. Sebeok's interest in Clever Hans phenomenon started under the influence of Heini Hediger (see Sebeok 2001c: 89). A collection of Sebeok's writings on this phenomenon is included in Sebeok 2000b.

21. In Sebeok (1986: 189–213), one can find the reprintings of his reviews on the works of Rumbaugh, Premacks, and others who attempted to teach human language to apes. These discussions remain paradigmatic (e.g., O'Connor 2002).

the specialists in the field were not always satisfactory to him. Those who worked in ethology (mostly within the neo-Darwinian paradigm) did not see the zoosemiotic approach as sufficiently operational. And those who studied the linguistic behaviour of apes thought that Sebeok's critique had not been entirely to the point. This has probably been an additional reason for his search for more fundamental principles of biosemiotics.

Biosemiotics

Biosemiotics is a kind of theoretical biology – but it is more. It is a ‘a biological way of thinking’: Sebeok uses this expression in the good sense of a major theoretical biologist of his youth, Joseph H. Woodger (Sebeok 1972: 1).

The step Sebeok was able to take from zoosemiotics to biosemiotics has quite evidently been a result of, on one hand, reading the classical works of Jakob von Uexküll at the end of 1970s, and, on the other hand, his conversations with Thure von Uexküll and Giorgio Prodi. He has himself described the details of these meetings on several occasions (e.g., Sebeok 1998). This turn also had a Russian dimension via a book by Stepanov (1971), which Sebeok came across probably soon after its publication: Stepanov's book opens with a chapter titled “Biosemiotics”. However, Sebeok himself for a long time hesitated to use this term. For instance, the collective paper that appeared in *Semiotica* in 1984 (Anderson *et al.* 1984),²² and that formulated a direct research program for semiotic biology, still avoided this term, as did also his dictionary of 1986 (Sebeok ed. 1986).²³

In a way, the turn toward biosemiotics has probably something to do with changes in general semiotics. This becomes clear when the semiotics of the 1960s and 1970s is compared to semiotics in the 1990s. For instance, if in the first period Roman Jakobson's influence was considerable, then

22. The writing of this *manifesto* has been proposed by Sebeok. The drafts were written by Anderson and circulated for comments and additions among other authors. About more details on the formation of this paper see Sebeok 1986: 17–18. See also Anderson, this volume, above pp. 24ff.

23. I also remember how curiously Sebeok questioned me about the term ‘bio-semiotics’ when I freely used it during my talk at the Glottortal meeting, 1992. As we learned much later, the term had been used already in 1962 by Friedrich S. Rothschild (Kull 1999c).

in the second period a stronger emphasis on the theoretical concepts of Charles Peirce became a dominating influence. This also means a change in the central concepts – *from* message, sender, and receiver, *to* sign (or text), semiosis, and interpretant.

Sebeok himself has told a story about his discovery and rediscovery of Uexküll many times (Sebeok 1998; see Kull 2001: 11; etc.). Since his lecture about Uexküll in Vienna in 1977, and his meeting with Thure von Uexküll, he represented Jakob von Uexküll's as a classic not only of semiotic biology, but of semiotics in general. However, already in 1963 he wrote (Sebeok 1963: 466):

The task for the immediate future will be to treat, comprehensively and exhaustively, the achievements of zoosemiotics from Darwin through J. von Uexküll to the present day.

From 1977, Sebeok became interested in the concept of “the semiotic self” (Sebeok 1986: xi; 1992: 335). This includes a problem of “how are self-images established, maintained, and transmuted into performances” (Sebeok 1992: 334). He pointed out (1992: 336) that “bodily sensations and the like, most saliently among them those connected with illness, are not amenable to verbal expression because they lack external referents”. He proposed (1986: xi) “to discriminate between two apprehensions of the self, (a) the immunologic or biochemical self, with, however, semiotic overtones, and (b) the semiotic or social self, with, however, biological anchoring,” thus showing that “the self is a joint product of both natural and cultural processes”.

The problem of the semiotic self is inherently related to the notion of endosemiosis – a field introduced very much due to Sebeok (in Sebeok 1976, this concept was first proposed; see also Sebeok 2001c: 20).

There has been a well-known debate about the concepts of primary and secondary modelling systems (see, e.g., Sebeok and Danesi 2000). According to the initial formulation by Lotman, language is the primary modelling system, whereas culture comprises the secondary one. Later, Sebeok argued that there exists the zoosemiotic system which has to be called the primary one, leaving the secondary status to language, and the tertiary one to culture (e.g., Sebeok 1994). Sebeok's view has been supported by many later authors (cf. Moriarty 1994; Deely 2007).

Sebeok, who has argued for introducing semiotics into all areas of biology, has found it reasonable to specify the terms in corresponding ways. All main types of living creatures serve as an object for semiotic analysis (Sebeok 1997a: 440):

According to one standard scheme for the broad classification of organisms, five superkingdoms are now distinguished: protists; bacteria; plants; animals; and fungi. In each group, distinct but intertwined modes of semiosis have evolved.

Indeed, as the first major distinction is into kingdoms, and biology is using corresponding divisions in scientific inquiry as bacteriology, protistology, botany, mycology, and zoology, one can, correspondingly, apply biosemiotic divisions for each kingdom – e.g., *bacteriosemiotics*, *phytosemiotics*, *mycosemiotics*, *zoosemiotics*, etc. Such a terminology would emphasize that there exist two principal ways in which organisms can be studied – (a) on the basis of a methodology of natural science, and (b) on the basis of an extended (semiotic) methodology, which is the methodology of the sciences of meaning (*Bedeutungswissenschaften*).

Sebeok, whose particular emphasis is on the plant/animal/fungus tri-
chotomy, does not take these categories as levels, but more as the complementary dimensions (Sebeok 1997a: 441):

These three categories, distinguished by taxonomers according to the nutritional patterns of each class, that is, three different ways in which information (negentropy) is maintained by extracting order out of their environment, are complementary.

He also notes (1997a: 441), but does not explore, “the remarkable parallelism between this systematists’ P-A-F [plant-animal-fungus] model and the classic semioticians’ O-S-I [object-sign-interpretant] model”. This is because (Sebeok 1988: 65) “on this macroscopic scale animals can be catalogued as intermediate transforming agents between two polar opposite lifeforms: the composers, or organisms that ‘build up’, and the decomposers, or organisms that ‘break down’” (see also Sebeok 1988: 72n1). “According to this, in general, a fungus/interpretant is mediately determined by an animal/sign, which is determined by a plant/object (but plant/fungus are likewise variant life forms, of course, just as object/interpretant are both sign variants)” (Sebeok 1999b: 391).

In the framework of endosemiotics, a special area of *immunosemiotics* (and semioimmunology) has also been noted as a field dealing with the immunological code, immunological memory and recognition (Sebeok 1997a: 438, 2001c: 21; Sercarz et al. 1988).

As Eugen Baer says (1987: 206), “Sebeok’s work marks a transition of semiotics from a one-sided subjection to the linguistic model to a biologically oriented investigation of Umwelt.” In his papers on different topics,

Sebeok has tried to emphasize and demonstrate the existence of semiotic phenomena in non-human organisms, and to analyse the biological basis of various sign processes. This includes, among other processes, the biological derivation of non-verbal art forms, as described in his remarkable article “Precognitions of art” (Sebeok 1979, 1984).

While discussing the view held by semiotics of culture (that the appearance of culture provides the semiotic threshold), there is surprisingly much in what Sebeok incorporates from the Tartu School, particularly the concept of modelling systems as introduced into semiotics by Juri Lotman and his colleagues (e.g., the Kääriku Summer Schools on Secondary Modelling Systems, in 1960s). The book *Forms of Meaning* (Sebeok, Danesi 2000) uses the concept of the modelling system as central. Also (Baer 1987: 205), “many of Sebeok’s studies constitute fundamental continuations of Uexküll’s project of Umwelt research”.

When describing the semiotic behaviour of animals and other organisms, Sebeok does not apply a gradualistic approach. He sharply distinguishes life as the arena of semiosis from non-life, as well as human semiosis from non-human semiosis.

In addition to specifically biosemiotic problems, Sebeok also touches, in some of his writings, on the area of representations of (and approaches to) nature in cultures. This field, nowadays known as (cultural) *ecosemiotics*, should be taken as different from biosemiotics, because it does not deal directly with biological problems and belongs rather to the domain of the semiotics of culture.

The core statements of biosemiotics

“Semiotics is the story of life itself”, says Sebeok.²⁴ It will be fascinating to try to formulate briefly, in a thesis-like form, the main statements of Sebeok on biological semiotics.²⁵ The version of these “theses on biosemiotics” that follows below is compiled from his various writings on the issue. Among his own papers, the article “Signs, bridges, origins”

24. This sentence comes from Sebeok’s interview with Roger Parent: see the Parent 2005 video, *Cultures in Conflict* “Part 3: Culture and communication: Revolution and communication, 7: 27”.

25. Two other recent attempts to formulate the main theses of biosemiotics (mainly referring to Jesper Hoffmeyer’s writings) can be found in Emmeche *et al.* 2002: 13–24, and in Stjernfelt 2002.

includes some of these statements, formulated in terms of “theorems” and “lemmas” (Sebeok 1996b, also published in a slightly edited version in Sebeok 2001c: 59–73).

- (1) *Life is semiosis*. “Semiosis, or a triadic cooperative production involving a sign, its object, and its interpretant [. . .], is as much a criterial attribute of all life as is the ability to metabolize” (Umiker-Sebeok and Sebeok 1980: 1). There is his earlier statement, often cited (1991b: 158): “It is possible [. . .] to describe language as well as living systems from a unified cybernetic standpoint. While this is perhaps no more than a useful analogy at present, hopefully providing insight if not yet new information, a mutual appreciation of genetics, animal communication studies, and linguistics may lead to a full understanding of the dynamics of semiosis, and this may, in the last analysis, turn out to be no less than the definition of life”. Remarkably, the very first sentence that opens Sebeok’s text *Signs: An Introduction to Semiotics* in its latest version is this (2001e: 1): “The phenomenon that distinguishes life forms from inanimate objects is *semiosis*”. We have named this *Sebeok’s Thesis*.²⁶ Here is another formulation of it (Sebeok 1991a: 22): “The process of message exchanges, or semiosis, is an indispensable characteristic of all terrestrial life forms. It is this capacity for containing, replicating, and expressing messages, of extracting their signification, that, in fact, distinguishes them more from the nonliving”.
- (2) *Umwelt is a model*. “The recalcitrant term ‘Umwelt’ had best be rendered in English by the word ‘model’” (Sebeok 1988: 72). “All, and only, living entities incorporate a species-specific model (Umwelt) of their universe” (Sebeok 1996b: 102).
- (3) *There exists a global communicative network in the biosphere, formed in its lowest level by bacteria*. “The earliest, smallest known biospheric module with semiotic potential [. . .] is a single bacterial cell. [. . .] The largest, most complex living entity may be [. . .] Gaia. Both units at the polar ends [. . .] display general properties of autopoietic entities, [. . .] but it is now bacteria that merit, in my opinion, special consideration on the part of all who would work at semiotics professionally” (Sebeok 2001c: 12).
- (4) *Protists, plants, fungi, and animals represent different basic communication strategies, and accordingly, correspondent branches of biosemiotics*

26. Kull, Emmeche, and Favareau 2008: 43.

are relevant. “Just as there are different sorts of strategies for metabolic activity, there are also various kinds of communication devices” (Umiker-Sebeok, Sebeok, 1980: 1).

- (5) *Endosemiosis occurs in organism – with multiple (genetic, immune, metabolic, neural) codes.* These four codes (with references to relevant literature) are mentioned, e.g., in Sebeok 1996b: 107–108.
- (6) *Symbiosis is a token of semiosis.* “The biologist’s notion of symbiosis [...] is equivalent to the philosopher’s notion of semiosis” (Sebeok 1988: 72). “Inasmuch as processes of sign transmission outside and inside organisms are at play, it appears not unreasonable to suppose ‘symbiosis’ to be a token of ‘semiosis’ and ‘endosymbiosis’ to be a token of ‘endosemiosis’” (Sebeok 1996b: 102).
- (7) *Language appears with syntax. There are no syntactic structures in animal sign systems.* “What we know of zoosemiotic processes furnishes no evidence of syntactic structures, not even in any of the alloprimates” (Sebeok 1996b: 108).

These, and a couple of other analogous statements, form some important nodes in the network of Sebeok’s ideas, nodes also illustrated by him through a large number of examples, references, and citations from a large variety of sources he has used in compiling his texts.

Building a field: The biosemiotic web

Despite the many fields to which Sebeok contributed, he evidently viewed his work in biosemiotics as of central importance. When he understood that the building of semiotic biology would mean a paradigmatic change, he consciously wanted to establish the necessary attributes for this area to become a recognised independent field of research. This means, above all, the publications, particularly thematic volumes and monographs, and the history of the field.

An important event in this direction has been the publication of English translations of Jakob von Uexküll’s two books of 1940 and 1934, respectively, as special issues of *Semiotica*, vol. 42.1 (1982), and vol. 89.4 (1992) – quite extraordinary for this journal. Certainly, Sebeok’s role has been decisive in getting Uexküll acknowledged as one of the major classics of contemporary semiotics.

Sebeok, together with Thure von Uexküll, was the engine behind the two specialised meetings on biosemiotics which took place in Glottertal,

a village near Freiburg am Main in Germany, in 1991 and 1992.²⁷ As Jesper Hoffmeyer has said (2002: 385): “these early Glotterbad meetings were perhaps especially important because they left an impression on everybody that biosemiotics was now for real.”

Briefly, before the Glottertal meetings, the first collection of papers on biosemiotics had been published under Sebeok’s editorship, together with his wife, Jean Umiker-Sebeok (Sebeok and Umiker-Sebeok 1992).

Sebeok’s support of biosemiotic publications has been remarkable – for example, the series of writings by Thure von Uexküll, a translation of Giorgio Prodi’s work, the spread of phytosemiotic papers by Martin Krampen (1981, and its several later versions), and the English translation of a book by Jesper Hoffmeyer (1996). With regard to Hoffmeyer’s book, Sebeok organised a series of reviews that were published as a special issue of *Semiotica* (vol. 120–3/4, 1998). Without Sebeok’s enthusiastic support, the two large special volumes on biosemiotics – *Semiotica* vol. 127–1/4 (1999), edited by J. Hoffmeyer and C. Emmeche, and vol. 134–1/4 (2001), edited by K. Kull – would not have been published.

Sebeok devoted many of his conference lectures to the various aspects of the history of biosemiotics. Many of his writings include descriptions of the work and views of Jakob von Uexküll (e.g., Sebeok 1977; 1998). In several of his papers he tried to frame the history of biosemiotics in general (Sebeok 1996a, 1999a, 2001a).²⁸

During the second half of the 20th century’s closing decade, there was a conscious attempt to produce a systematic series of papers on the history of biosemiotics. This has resulted in a series of papers that reviewed the biological aspects in the works of semiotic classics – Peirce, Morris, Jakobson, Lotman, and few others.²⁹ We talked about this plan several times, during our meetings in Imatra and elsewhere.

Still, despite the large number of writings, there seem to be a couple of biosemiotic problems that Sebeok hardly touched. One of these concerns his avoidance of the topic of (biological) epistemology, otherwise quite intensively discussed in biosemiotic literature (e.g., Hoffmeyer 1996; Pattee

27. About that meeting, see also in Hoffmeyer 2002: 384–385, Hoffmeyer 2008: 356, 365–366, and Sebeok 2001a: 65; 2001c: 170.

28. However, he never wrote a general review on the history of biosemiotics (cf. Favareau 2007; Kull 1999a).

29. See footnote 7.



Figure 11.3. Tom and his cat, at home in Bloomington 1999. (Photo by K. Kull.)

2001; Vehkavaara 2002). I would hypothesize that Sebeok's position has to do with his use of the concepts of model and modelling. Indeed, "in a biosemiotic paradigm, the function of singularized modelling is viewed as a general strategy for giving the perception of single objects, unitary events, individual feelings, etc., a knowable form [...]. Signs are [...] 'recognition-enhancing forms', which allow for the detection of relevant incoming sensory information in a patterned fashion" (Sebeok and Danesi 2000: 20). Also, in a very interesting paper, "What do we know about signifying behavior in the domestic cat (*Felis catus*)?", (Sebeok 2001c: 74–96) asks and sheds light on several questions about the ways of knowing the worlds of other organisms (Fig. 11.3).

Another problem that Sebeok scarcely analyses is the methodology of biosemiotic inquiry. One can be referred to the works of Jakob von Uexküll as providing the necessary approach; however, in addition to the points described by Sebeok, the practical questions of how the non-verbal sign systems of non-human organisms should be studied, and what are the criteria that allow us to assign them the usage of meaning, are questions that still require a profound elaboration. Otherwise, the step from ethology to biosemiotics is hardly thinkable.

Building biosemiotics surpasses the borders of biology. “Indeed, there is a lot of work to do for serious philosophy, considering how many central philosophical topics [there are] – of mind, language, epistemology, and metaphysics – that cannot remain unaffected by the biosemiotic turn” (Emmeche 2002: 158).

Credo

It is worth bearing in mind Sebeok’s self-characterization (1995: 121):

I firmly believe that there are, and should be, two complementary sorts of scholars: I call them moles and bees. Moles have tough nuzzles and powerful forefeet for burrowing ever deeper in one and the same spot. Such a profound scholarly mole I am not.

Bees, by contrast, dart solitary from flower to flower, sipping nectar, gathering pollen from flowers, serendipitously fertilizing whatever they touch. I fancy that I have always been something of a, maybe superficial, academic *Apis mellifera*. This honeybee is the semiotic species par excellence, possessed, next to our own, of the most elaborate social communication system thus far recognized by ethologists. Too, it seldom stings unless its budget is threatened.

There also exists an earlier version of this characterization that uses an example of laboratory rats.³⁰ It is important to understand that there is much more than allegory in these slightly humoristic accounts. Since, according to Sebeok, the life process is the same in all living creatures, and since this is a semiotic process, these comparisons state something about the ways of life in general. This can be illustrated by a reference in his book entitled *I Think I Am a Verb* (Sebeok 1986: vii; my emphasis) to his two daughters as his “immediate and emotional *interpretants*”.

Thomas Sebeok’s credo is something that we should all learn from him. In his own words (Sebeok 1995: 125, my emphasis):

30. “There appear to be two antipodal sorts of bookmen. There are those who derive endless delight from their solitary pleasure, which they pursue like self-stimulating laboratory rats, with electrodes implanted in their anterior hypothalamus, unceasingly bar-pressing in preference to any other activity. Then there are those of us whose bar-pressing habit is rewarded solely by a change in the level of illumination – in a word, novelty” (Sebeok 1986: x).

To conclude [...] on a semiotic note, and drawing on an image from Samuel Butler, I would observe that an academic is a sign's way of spawning further, more developed academics. The administration's task is to ensure that this process works smoothly. There are two fundamental strategies to accomplish these ends: first, by *publishing and teaching as much as possible*; and, equally important, by *doing one's best to facilitate the success of one's colleagues* in these respects. These are the only things I have ever wanted to do in my academic life.

This bears repeating.

References

- Anderson, Myrdene
1990 "Biology and semiotics", in *Semiotics in the Individual Sciences*, ed. W. A. Koch (Bochum: Universitätsverlag Dr. N. Brockmeyer), Part I, 254–281.
- Anderson, Myrdene
2000 "Sharing G. Evelyn Hutchinson's fabricational noise". *Sign Systems Studies* 28: 388–396.
- Anderson, Myrdene
2003a "Rothschild's ouroboros". *Sign Systems Studies* 31(1): 301–314.
- Anderson, Myrdene
2003b Thomas Albert Sebeok (1920–2001). *American Anthropologist* 105(1): 228–231.
- Anderson, Myrdene, John Deely, Martin Krampen, Joseph Ransdell, Thomas A. Sebeok, Uexküll, Thure von
1984 "A semiotic perspective on the sciences: steps toward a new paradigm". *Semiotica* 52: 7–47.
- Baer, Eugen
1987 "Thomas A. Sebeok's doctrine of signs", in *Classics of Semiotics*, ed. M. Krampen, K. Oehler, R. Posner, T.A. Sebeok, and T. von Uexküll (New York: Plenum Press), 181–210.
- Bernard, Jeff
2002 "In memory of Thomas A: Sebeok (1920–2001)", *Zeitschrift für Semiotik* 24(1).
- Bernard, Jeff, John Deely, Vilmos Voigt, and Gloria Withalm, Editors
1993 *Symbolicity: Proceedings of the International Semioticians' Conference in Honor of Thomas A. Sebeok's 70th Birthday* (Bound together with the *Semiotics 1990 SSA Proceedings* volume; Lanham, MD: University Press of America).
- Bonfante, Giulano, and Thomas A. Sebeok
1944 "Linguistics and the age and area hypothesis", *American Anthropologist* 46, 382–386.

- Bouissac, Paul, Michael Herzfeld, Posner, Roland, Editors
 1986 *Iconicity: Essays on the Nature of Culture: Festschrift für T. A. Sebeok zum 65. Geburtstag* (Tübingen: Staufenburg Verlag).
- Brauckmann, Sabine
 2000 “Steps towards an ecology of cognition: A holistic essay”, *Sign Systems Studies* 28: 397–420.
- Brier, Søren
 2003 “Thomas Sebeok: Mister (Bio)semiotics”, *Cybernetics and Human Knowing* 10.1, 102–105.
- Carmeli, Yoram S.
 2002 “On the ‘culture’ dimension in a biosemiotic inquiry”, *Semiotica* 141–1/4, 415–430.
- Cimatti, Felice
 2000 “The circular semiosis of Giorgio Prodi”, *Sign Systems Studies* 28, 351–379.
- Cobley, Paul
 2008 “Introduction to Biosemiotics: The New Biological Synthesis” (review), *The American Journal of Semiotics* 24.1–3, 201–204.
- Danesi, Marcel
 1990 “Zoosemiotics: Thomas Sebeok fashions a field of scientific inquiry”, in Thomas A. Sebeok, *Essays in Zoosemiotics*. (Toronto: Toronto Semiotic Circle monograph), 7–9.
- Danesi, Marcel
 1998 *The Body in the Sign: Thomas A. Sebeok and Semiotics* (New York: Legas).
- Danesi, Marcel
 2000 “The biosemiotic paradigm of Thomas A. Sebeok”, in *Commentationes in honorem Thomas A. Sebeok octogenarii A. D. MM editae*, ed. Eero Tarasti (Imatra: International Semiotics Institute), 5–29.
- Danesi, Marcel
 2001 “Hediger through Sebeok: An introduction to the biosemiotic paradigm”, in T. A. Sebeok, *The Swiss Pioneer in Nonverbal Communication Studies: Heini Hediger (1908–1992)* (New York: Legas), 7–13.
- Danesi, Marcel, Editor
 2001 *The Invention of Global Semiotics. A Collection of Essays on the Life and Work of Thomas A. Sebeok* (New York: Legas).
- Deely, John
 1995 “Quondam magician, possible martian, semiotician: Thomas Albert Sebeok”, in *Ensaio em homenagem a: Essays in Honor of Thomas A. Sebeok*, ed. Norma Tasca (Portu, Portugal: Almeida), 17–26.
- Deely, John
 1998 “Sebeok, Thomas A.”, in *Encyclopedia of Semiotics*, ed. Paul Bouissac (New York: Oxford University Press), 557–559.

- Deely, John
2003 "The quasi-error of the external world: An essay for Thomas A. Sebeok, in memoriam", in *Cybernetics & Human Knowing* 10.1, 25–46.
- Deely, John
2004 "Tom Sebeok and the external world", *Semiotica* 150–1/4, 1–21.
- Deely, John
2005 *Thomas Albert Sebeok and semiotics* (Sofia: Tip-Top Press, ISBN 954-8964-65-1).
- Deely, John
2007a "The Primary Modeling System in Animals", in *La Filosofia del Linguaggio come arte dell'ascolto: sulla ricerca scientifica di Augusto Ponzio* | *Philosophy of Language as the art of listening: on Augusto Ponzio's scientific research*, ed. Susan Petrilli (Bari, Italy: Edizione dal Sud), 161–179.
- Deely, John, Editor
1995 *Thomas A. Sebeok: Bibliography 1942–1995* (Bloomington, IN: Eurolingua).
- Eco, Umberto
1987 "The influence of Roman Jakobson on the development of semiotics", in *Classics of Semiotics*, ed. M. Krampen, K. Oehler, R. Posner, T.A. Sebeok, and T. von Uexküll (New York: Plenum Press), 109–127.
- Emmeche, Claus
2002 "Taking the semiotic turn, or how significant philosophy of biology should be done", *Sats – Nordic Journal of Philosophy* 3.1, 155–162.
- Emmeche, Claus, Kalevi Kull, and Frederik Stjernfelt
2002 *Reading Hoffmeyer, Rethinking Biology* (Tartu Semiotics Library 3; Tartu, Estonia: Tartu University Press).
- Favareau, Donald
2007 "The evolutionary history of biosemiotics", in *Introduction to Biosemiotics: The New Biological Synthesis*, ed. Marcello Barbieri (Berlin: Springer), 1–67.
- Hoffmeyer, Jesper
1996 *Signs of Meaning in the Universe* (Bloomington, IN: Indiana University Press).
- Hoffmeyer, Jesper
2002 "Obituary: Thomas A. Sebeok", *Sign Systems Studies*, 30(1), 383–386.
- Hoffmeyer, Jesper
2008 *Biosemiotics: An Examination into the Signs of Life and the Life of Signs* (Scranton: Scranton University Press).
- Hoffmeyer, Jesper, Editor
2008 *A Legacy of Living Systems: Gregory Bateson as a Precursor to Biosemiotics* (Dordrecht: Springer).

- Hoffmeyer, Jesper, and Claus Emmeche
 1991 “Code-duality and the semiotics of nature”, in *On Semiotic Modeling*, ed. Myrdene Anderson and floyd merrell (Berlin: Mouton de Gruyter), 117–166.
- Kalmus, Hans
 1950 “A cybernetic aspect of genetics”, *Journal of Heredity* 41, 19–22.
- Kalmus, Hans
 1962 “Analogies of language to life”, *Language and Speech* 5.1, 15–25.
- Krampen, Martin
 1981 “Phytosemiotics”, *Semiotica*, 36–3/4, 187–209.
- Kull, Kalevi
 1999a “Biosemiotics in the twentieth century: A view from biology”, *Semiotica*, 127–1/4, 385–414.
- Kull, Kalevi
 1999b “Towards biosemiotics with Yuri Lotman”, *Semiotica*, 127–1/4, 115–131.
- Kull, Kalevi
 1999c “On the history of joining bio with semio: F. S. Rothschild and the biosemiotic rules”, *Sign Systems Studies* 27, 128–138.
- Kull, Kalevi
 2001 “Jakob von Uexküll: An introduction”, *Semiotica*, 134–1/4, 1–59.
- Kull, Kalevi
 2003 “Thomas A. Sebeok and biology: Building biosemiotics”, *Cybernetics and Human Knowing* 10.1, 47–60.
- Kull, Kalevi, Claus Emmeche, Donald Favareau
 2008 “Biosemiotic questions”, *Biosemiotics* 1.1, 41–55.
- Kull, Kalevi, Mihhail Lotman, and Peeter Torop
 2002 “In memoriam Thomas Albert Sebeok”, *Trames* 6.1, 110–112.
- Kull, Kalevi, Silvi Salupere, Peeter Torop
 2009 “Semiotics has no beginning”, Introduction to John Deely, *Basics of semiotics* (4th and 5th eds.; Tartu Semiotics Library 4 and 4.2, respectively; Tartu, Estonia: Tartu University Press), bilingual Estonian/English in 4th ed., pp. viii–xxv; English only in 5th ed., pp. xi–xxvii.
- Moriarty, Sandra
 1994 “Visual communication as a primary system”, *Journal of Visual Literacy* 14.2, 11–21.
- Nöth, Winfried
 2000 *Handbuch der Semiotik* (2te Auflage; Stuttgart: J. B. Metzler).
- Nuessel, Frank
 2000 “A sign is just a sign: Sebeok revisited in Italian translation”, *Semiotica* 131–3/4, 201–216.

- O'Connor, Anahad
2002 "Thomas Sebeok, 81, debunker of ape-human speech theory, is dead", *The New York Times*, 2 January.
- Pattee, Howard H.
2001 "Irreducible and complementary semiotic forms", *Semiotica* 134–1/4, 341–358.
- Petrilli, Susan
1999a "The biological basis of Victoria Welby's signifiacs", *Semiotica* 127–1/4, 23–66.
- Petrilli, Susan
1999b "Charles Morris's biosemiotics", *Semiotica* 127–1/4, 67–102.
- Petrilli, Susan
2002 "Una vita per i segni della vita: Thomas A. Sebeok", *Athanos* 5, 19–20.
- Petrilli, Susan
2008 "A tribute to Thomas A. Sebeok", *Biosemiotics* 1.1, 25–39.
- Petrilli, Susan, and Augusto Ponzio
2001 *Thomas Sebeok and the Signs of Life*. Cambridge: Icon Books.
- Ponzio, Augusto, and Susan Petrilli
2002 *I segni e la vita: La semiotica globale di Thomas A. Sebeok* (Milano: Spirali).
- Randviir, Anti
1997 "What is semiotics, really? An interview with Thomas A. Sebeok" (conducted 3 June 1997), *Trames* 1.4, 291–305.
- Rothschild, Friedrich Salomon
1962 "Laws of symbolic mediation in the dynamics of self and personality", *Annals of New York Academy of Sciences* 96, 774–784.
- Ruse, Michael
1998 "Zoosemiotics", in *Encyclopedia of Semiotics*, ed. Paul Bouissac (New York: Oxford University Press), 652.
- Santaella-Braga, Lucia
1999 "Peirce and biology", *Semiotica* 127–1/4, 5–21.
- Schwab, Joseph J.
1941 "The role of biology in general education: The problem of value", *Bios* 12, 87–97.
- Sebeok, Thomas Albert
1962 "Coding in the evolution of signalling behavior", *Behavioral Science* 7: 430–442.
- Sebeok, Thomas Albert
1963 "Communication among social bees; porpoises and sonar; man and dolphin", *Language* 39: 448–466.
- Sebeok, Thomas Albert
1965a "Animal communication", *Science*, 147, 1006–1014.
- Sebeok, Thomas Albert
1965b "Zoosemiotics: A new key to linguistics", *The Review* 7: 27–33.

- Sebeok, Thomas Albert
1965c "Coding in animals and man", *ETC* 22: 330–249.
- Sebeok, Thomas Albert
1969 "Semiotics and ethology", in *Approaches to Animal Communication*, ed. T.A. Sebeok & A. Ramsay (The Hague: Mouton), 200–231.
- Sebeok, Thomas Albert
1972 *Perspectives in Zoosemiotics* (The Hague: Mouton).
- Sebeok, Thomas Albert
1976 *Contributions to the Doctrine of Signs* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas Albert
1977 "Ecumenicalism in semiotics", in *A Perfusion of Signs*, ed. T. A. Sebeok (Bloomington, IN: Indiana University Press), 180–206.
- Sebeok, Thomas Albert
1979 "Prefigurations of Art", *Semiotica* 27–1/2, 3–73.
- Sebeok, Thomas Albert
1980 "Looking in the destination for what should have been sought in the source", *Speaking of Apes: A Critical Anthology of Two-Way Communication with Man*, ed. T. A. Sebeok & J. Umiker-Sebeok (New York: Plenum Press), 407–427.
- Sebeok, Thomas Albert
1984 "Prefigurations of art [abstract only]", in *Sign, System and Function: Papers of the First and Second Polish-American Semiotics Colloquia*, ed. Jerzy Pelc, Thomas A. Sebeok, Edward Stankiewicz, and Thomas G. Winner (=Approaches to Semiotics 64; Berlin: Mouton Publishers), 361–362.
- Sebeok, Thomas Albert
1986 *I Think I Am a Verb: More Contributions to the Doctrine of Signs* (New York: Plenum Press).
- Sebeok, Thomas Albert
1987 "Karl Bühler", in *Classics of semiotics*, ed. M. Krampen, K. Oehler, R. Posner, T. A. Sebeok, and T. von Uexküll (New York: Plenum), 129–145.
- Sebeok, Thomas Albert
1988 "'Animal' in biological and semiotic perspective", *What is an Animal?*, ed. T. Ingold (London: Unwin Hyman), 63–76.
- Sebeok, Thomas Albert
1990 *Essays in Zoosemiotics* (Toronto: Toronto Semiotic Circle).
- Sebeok, Thomas Albert
1991a *A Sign is Just a Sign* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas Albert
1991b *American Signatures: Semiotic Inquiry and Method*, ed. Iris Smith (Norman, OK: University of Oklahoma Press).

- Sebeok, Thomas Albert
1992 “‘Tell me, where is fancy bred?': The biosemiotic self”, in *Biosemiotics: The Semiotic Web 1991*, ed. T. A. Sebeok, & J. Umiker-Sebeok (Berlin: Mouton de Gruyter), 333–343.
- Sebeok, Thomas Albert
1994 *Signs: An Introduction to Semiotics* (Toronto: University of Toronto Press).
- Sebeok, Thomas Albert
1995 “Into the rose-garden”, in *Thomas A. Sebeok: Bibliography 1942–1995*, ed. J. Deely (Bloomington, IN: Eurolingua), 116–125.
- Sebeok, Thomas Albert
1996a “Galen in medical semiotics”, *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis* 1.1, 89–111.
- Sebeok, Thomas Albert
1996b “Signs, bridges, origins”, in *Origins of Language*, ed. J. Trabant (Budapest: Collegium Budapest), 89–115.
- Sebeok, Thomas Albert
1997a “The evolution of semiosis”, *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture*, ed. R. Posner, K. Robering, and T. A. Sebeok (Berlin: Walter de Gruyter), Vol. 1, pp. 436–446.
- Sebeok, Thomas Albert
1997b “Give me another horse”, in *Reading Eco: An Anthology*, ed. Rocco Capozzi (Bloomington, IN: Indiana University Press), 276–282.
- Sebeok, Thomas Albert
1997c “Foreword”, In R. Capozzi (ed.), *Reading Eco: An Anthology* (Bloomington, IN: Indiana University Press), xi–xvi.
- Sebeok, Thomas Albert
1998 “The Estonian connection”, *Sign Systems Studies* 26: 20–41.
- Sebeok, Thomas Albert
1999a “Editor’s note: Towards a prehistory of biosemiotics”, *Semiotica* 127(1/4): 1–3.
- Sebeok, Thomas Albert
1999b “The life science and the sign science”, *Applied Semiotics* 6/7: 386–393.
- Sebeok, Thomas Albert
2000a “The music of the spheres”, *Semiotica* 128(3/4): 527–535.
- Sebeok, Thomas Albert
2000b *Essays in Semiotics I: Life Signs* (New York: Legas).
- Sebeok, Thomas Albert
2000c “Semiotics as bridge between humanities and sciences”, in *Semiotics as Bridge between the Humanities and the Sciences*, ed. Paul Perron, Leonard G. Sbrocchi, Paul Colilli, and Marcel Danesi (Ottawa, Canada: Legas), 76–100.

- Sebeok, Thomas Albert
 2001a “Biosemiotics: Its roots, proliferation, and prospects”, *Semiotica* 134–1/4,: 61–78.
- Sebeok, Thomas Albert
 2001b *The Swiss Pioneer in Nonverbal Communication Studies: Heini Hediger (1908–1992)* (New York: Legas).
- Sebeok, Thomas Albert
 2001c *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas Albert
 2001d “Biosemiotics”, In: Copley, Paul (ed.), *The Routledge Companion to Semiotics and Linguistics*, ed. Paul Copley (London: Routledge), 163–164.
- Sebeok, Thomas Albert
 2001e *Signs: An Introduction to Semiotics* (2nd ed.; Toronto: University of Toronto Press).
- Sebeok, Thomas Albert
 2002 “La semiosfera come biosfera”, *Athanor*: 5, 11–18.
- Sebeok, Thomas A., Editor
 1968 *Animal Communication: Techniques of Study and Results of Research* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
 1977 *How Animals Communicate* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
 1986 *Encyclopedic Dictionary of Semiotics* (Berlin: Mouton de Gruyter), 3 vols.
- Sebeok, Thomas A., and Marcel Danesi
 2000 *The Forms of Meaning: Modeling Systems Theory and Semiotic Analysis*. Berlin: Mouton de Gruyter.
- Sebeok, Thomas A., and Alexander Ramsay, Editors
 1969 *Approaches to Animal Communication* (The Hague: Mouton).
- Sebeok, Thomas A., and Robert Rosenthal, Editors
 1981 *The Clever Hans Phenomenon: Communication with Horses, Whales, Apes, and People* (Annals of the New York Academy of Sciences, 364; New York, NY: New York Academy of Sciences).
- Sebeok, Thomas A., and Jean Umiker-Sebeok, Editors
 1980 *Speaking of Apes: A Critical Anthology of Two-Way Communication with Man* (New York: Plenum Press).
- Sebeok, Thomas A., and Jean Umiker-Sebeok, Editors
 1992 *Biosemiotics: The Semiotic Web 1991* (Berlin: Mouton de Gruyter).
- Sercarz, Eli E., Franco Celada, N. Avrion Mitchison, and Tomio Tada, Editors
 1988 *The Semiotics of Cellular Communication in the Immune System* (Berlin: Springer).

- Seriot, Patrick
2003 "La pensée nomogénétique en URSS dans l'entre-deux-guerres: l'histoire d'un contre-programme", *Cahiers de l'ILSL* 14, 183–191.
- Shintani, Laura A. M.
1999 "Roman Jakobson and biology: 'A system of systems'," *Semiotica*, 127–1/4, 103–113.
- Shintani, Laura A. M.
2001 "Said the spider to the fly: An interview with Tom Sebeok", in *The Invention of Global Semiotics: A Collection of Essays on the Life and Work of Thomas A. Sebeok*, ed. Marcel Danesi (Ottawa, Canada: Legas), 115–126.
- Smith, W. John
1974 "Zoosemiotics: Ethology and the theory of signs", in *Linguistics and Adjacent Arts and Sciences* (=Current Trends in Linguistics Volume 12), ed. T. A. Sebeok (The Hague: Mouton), pp. 561–626.
- Stepanov, Yuri S.
1971 *Semiotika* (Moskva: Nauka).
- Stjernfelt, Frederik
2002 "Tractatus Hoffmeyerensis: Biosemiotics as expressed in 22 basic hypotheses", *Sign Systems Studies* 30.1, 337–345.
- Tarasti, Eero, Editor
2000 *Commentationes in honorem Thomas A. Sebeok octogenarii A. D. MM editae* (Imatra: International Semiotics Institute).
- Tasca, Norma, Editor
1995 *Ensaio em homenagem a: Essays in Honor of Thomas A. Sebeok* (Porto, Portugal: Almeida).
- Turovski, Aleksei
2000 "The semiotics of animal freedom: A zoologist's attempt to perceive the semiotic aim of H. Hediger", *Sign Systems Studies* 28, 380–387.
- Uexküll, Jakob von
1940 "The theory of meaning", reprinted in *Semiotica* 42.1 (1982), 25–82.
- Uexküll, Jakob von
1934 "A stroll through the world of animals and men: A picture book of invisible worlds", reprinted in *Semiotica* 89.4 (1992), 319–391.
- Uexküll, Thure von
1986 "Commentaries on "The doctrine of signs" by Thomas Sebeok", *Journal of Social and Biological Structures* 9, 353–354.
- Umiker-Sebeok, Jean, and Thomas A. Sebeok
1980 "Introduction: Questioning apes", in *Speaking of Apes: A Critical Anthology of Two-Way Communication with Man*, ed. T. A. Sebeok and Jean Umiker-Sebeok (New York: Plenum Press), 1–59.

Vehkavaara, Tommi

2002 “Why and how to naturalize semiotic concepts for biosemiotics”,
Sign Systems Studies 30.1, 293–313.

Willis, John Christopher

1922 *Age and Area: A Study in Geographical Distribution and Origin
of Species* (Cambridge, England: Cambridge University Press).

Chapter 12

Tom's often neglected other theoretical source

floyd merrell

Where was he coming from?

Tom Sebeok. He commanded respect when he spoke – energetically, eloquently, forcefully, and at times aggressive and overbearing. In spite of Tom's virtually omniscient eye as an editor (when, as a bright-eyed new professor, I showed him a manuscript, he looked at the first page and immediately pointed out a typo), in spite of his powerful, persuasive verbal displays, it seemed to me that he always had something else up his sleeve, that there was something he wasn't saying. Enigmatic, suggestive, and provocative.

Tom's knack for the right words at the right time comes through even more attractively in his written language. His narrative throws multiple subtle allusions at you. His prose is tightly structured, but you must penetrate the finely tuned rhetorical surface, the clever, sometimes devious, suggestions and hints. You must often attend to what he *is not* saying as much as to what he *is* saying. Why? Because his prose is more than *just language*. Therein, I would suggest, lies much of his attractive force.

The more-than-language characteristic of Tom's verbal deliveries, whether through voice or the pen, is nowhere more apparent than in his essay opening the chapters of *A Sign is Just a Sign* (1991a). There is mention of Galileo's "grand book, the universe, written in the language of mathematics". But that isn't all there is to the universe; it is not "unfailingly inedited in deep mathematical idiom". There is also Cézanne's effort to capture the "book of nature" in a picture. There is Proust, who, savoring a morsel of pastry dipped in tea, created over a million words of narrative. There is Conan Doyle's allusion to a "drop of water" from which a logician could infer "the possibility of an Atlantic or a Niagara" – which calls to mind Blake's grain of sand, and that Buddhist string of pearls. There is also song, namely, "As Time Goes By", and the complex intertextual networks it evokes.

Here Tom is at his allusive and elusive best. He makes repeated mention of Dooley Wilson ("Sam"), who renders "As Time Goes By" in the presence of Bogart ("Rick"), time and time again: "Play it once, Sam,

for old time's sake. . . . Play it, Sam" (1991a: 2). The piano, the musician, the song, Rick's nurturing drink after drink while sinking ever deeper in despondence. These signs are to be felt, in the gut and in the soul, more than seen, sung, and said. Thus we have visual, auditory, gustatory, olfactory, tactile, and kinesthetic or somatic, sensations bringing about the emergence of signs becoming other signs (1991a: 1–2).

But enough preliminaries. Back to the "book of the universe" idea. The universe, "written"? During most of the twentieth century, who could have know better than Einstein? Yet, his theory-making, his modeling of the universe, was more than just language; it contained pre-linguistic qualities To wit (Hadamard 1945: 142–43):

The words of language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought are certain signs and more or less clear images which can be "voluntarily" reproduced and combined. . . . The above mentioned elements are, in my case, of visual and some of muscular type. . . . Conventional words or other signs have to be sought for laboriously only in a secondary state, when the associative play . . . is sufficiently established and can be reproduced at will.

Language, Tom reiterated in a number of essays, is already a *secondary modeling system* – actually, with due respect, I would rather call it a *process* – "by virtue of the all-but-singular fact that it incorporates a syntactic component. . . . Syntax makes it possible for hominids not only to represent immediate 'reality' . . . but also, uniquely among animals, to frame an indefinite number of possible worlds" (Sebeok 1994: 127).

Language a *secondary modeling process*? Our initial reaction is: But of course! Linguistic signs occupy the third echelon of Peirce's trio of categories, and of his three basic classes of signs: icons, indices and symbols. Language doesn't precede but follows on the heels of those more deep-seated visual, auditory, gustatory, olfactory, tactile, and kinesthetic or somatic images and signs. Therein we can catch a glimpse of that beneath-the-surface nature of Tom's prose, perhaps. Well, at least, the premonition deserves some contemplation.

Where was he going?

Speaking of deep-seated semiotic processes suggests that ignored leg of the "logic" triad that is usually whittled down to the customary two-way

combination of *induction* and *deduction* – which is to be expected, for after all, classical logic is bivalent through and through.

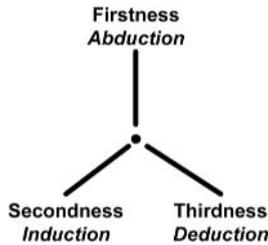


Figure 1.

I allude to *abduction*. That book co-edited by Umberto Eco and Tom, *The Sign of Three* (1983), pays homage to this first leg of the trio of terms, without which the tripod inevitably falters and falls. Obsessively attending to “threes” in his opening chapter of the book, Tom writes of the “singularity”, an infinitesimal point of infinitely packed matter – and a faithful image of Peirce’s *Firstness*. This “singularity”, of virtually infinite *possibility*, exploded, during the opening milliseconds, spraying the consequent expanding space with countless quarks, thus marking the beginning of *actuality*, or *Secondness*. These “fundamental particles, the basic building blocks from which all elementary particles are constituted, can best be grasped as signs” (1983: 4). As space expanded, natural laws governing the Cosmos “unfolded into the three interactions now known as gravitation, the electroweak force, and the strong (Hadronic) force that binds the particles of the nucleus in the atom”. And “evolution – *Thirdness* – of these three forces, in a single mathematical framework, as hoped for in the Grand Unified Theory, marks the appearances of Peirce’s ‘law’” (1983: 3–4).

Firstness, *Secondness* and *Thirdness*, *abduction* (possibility, what there *might be*), *induction* (the consequence of what there presumably *is*) and *deduction* (mediation of what hypothetically *might possibly be* and what most likely *could be* or *should be*, in light of what apparently *is*). Or, as Tom put it, there is (1) “esperable uberty”, (2) the world’s furniture, and (3) mediation. Moreover, Tom’s interconnecting (1) the categories, (2) triadicity, and (3) signs becoming signs (the evolutionary process of semiosis), is, I believe, the guiding light of much of his writing. But, I repeat, it always seems that he’s holding something back. I would suggest that, at least in part, Tom’s holding back stems from his acquaintance, in

person and through his writings, with physicist John Archibald Wheeler.¹ Tom was always a champion of modeling, as is especially evident in his essays on language as a *secondary modeling process*. He also once observed that semiotic modeling never took a step beyond disciplined and unfortunately (at times) idle speculation (personal communication). Nevertheless, he remained “intuitively attracted to John Archibald Wheeler’s closed loop of the world viewed as a self-synthesizing system of existences” (1991a: 143). Tom goes on to write that Wheeler followed his mentor, Niels Bohr, concerning the notion that, as Bohr put it: “We are suspended in language in such a way that we cannot say what is up and what is down. The word ‘reality’ is also a word, a word which we must learn to use correctly” (French and Kennedy 1985: 302, quoted in Sebeok 1991a: 143).

Suspended in language. How so? We must recall Bohr’s celebrated, and at times maligned, *Principle of Complementarity*, an imagistic depiction of which found its way to the Bohr family Coat of Arms. I refer to the Tao icon, *Yin-Yang*, unfortunately often taken in binary form: black/white, female/male, and so on. Actually, *Yin-Yang* sports no mere binarism at all. It incorporates complementarity. Commensurate with the nature of genes, in each of the two elements there is a tinge of the other element, and in the undulating, restless line separating them there is both the one and the other and at the same time neither the one nor the other, since the line of demarcation is *of* them and at the same time not *in* them. That is, the line is neither *Yin* nor *Yang*, but as not-*Yin* it shares some property with *Yang* and as not-*Yang* it shares some property with *Yin*, so it is in a sense *both* of them and *neither* of them.

In *Yin* we have *possibility*, in *Yang* we have *other*, and in the line we have the *medium* for creating a *distinction* that *mediates* between the one and the other. Firstness, Secondness and Thirdness. Or, *image*, *diagram* and *metaphor*, in the sense of Peirce’s “hypoicons” (CP 2.276). Hypoicons are less than full blown, actualized iconic signs, though they stand as premonitions of what is possibly to come. When actualized, then iconicity, indexicality and symbolicity can follow. Firstness, Secondness, and then linguistic and other sorts of symbols, or Thirdness. In this light, perhaps we should consider language a *tertiary modeling process*.

1. Tom’s “other theoretical source” mentioned in the title of this essay is an allusion specifically to Wheeler, Tom’s “physics connection”, that complements his widely known “biological connection”.

Backtracking

But wait! Do I sense you are looking over my shoulder Tom? Am I overindulging? Putting too much of myself into this? I turn, and you're nowhere to be found. Yet, . . . somehow. . . . I sense that this is where you've been heading, sinuously, elusively, in your own way.

Like Tom, we might wish to say that semiosis never ceases to astonish. How so? Because novelty often emerges in our signs, with their engratiating, puzzling, or otherwise menacing countenance. Because of what Peirce dubbed a *rhematical indexical sinsign*, a sign bearing Secondness of its Representamen, Secondness of its Semiotic Object, and Firstness of its Interpretant, a sign that surprises, takes us back, shocks us into awareness of its novelty (CP 2.54–65). This sign, obviously, is the initial stage of abduction, that can then spill over into an outpouring of a host of signs. Here, surely, we have the most basic sign of iconicity, that suggests some indexical interrelation, and gives us a hint of whatever interpretant might be forthcoming. But . . .

I must take these preliminary speculations further. Tom's work evokes speculation along multiply tangential lines. He is always so suggestive. What he says is always so brilliantly economic, and to the point, though he often leaves us dangling in mid air. That's the beauty of his writing: suggestive, with enigmatic implications, subtle hints, allowing you to get a peek behind the veil. What he says is engaging. But there's something peculiar. You hesitate, draw back, and think. No, that's not it. You ponder, muse, contemplate. This takes you from here to there and elsewhere, wherever that is, whenever that is. And you realize how vague it all is.

Vague. The term might allow us a clue regarding Tom's allusions in his seminal essay, "One, Two, Three UBERTY" (1983). We read that uberty "increases, while insecurity, or approach to certainty, minifies", which "depends on our hope, sooner or later, to guess at the conditions under which a given kind of phenomenon will present itself" (1983: 2). We read in this regard from Peirce (CP 8.384) that "logicians should have two principal aims: 1st, to bring about the amount and kind of *security* (approach to certainty) of each kind of reasoning, and 2nd, to bring out the possible and esperable uberty, or value in productiveness, of each kind". Tom goes on to tell us (1983: 2) that the "relationship of security to uberty is an inverse one, which means, plainly, that as the certainty of any guess plummets, its heuristic merit soars correspondingly". Here, once again, the consequences of quantum theory emerge, particularly in

physicist Louse de Broglie's observation that "when extreme precision is aimed at", it becomes no more than an ideal "whose real content tends to vanish away", and that "in the region of the exact sciences of human conduct, the strictness of the definitions varies inversely as their applicability to the world of Reality" (Broglie 1939: 280, 281).

Indirectly, these allusions lead us again to the idea of *abduction*. And in the final analysis they bear on *play* and *musement* (CP 6.640). Tom's terse yet playful style, his abrupt yet ludic nature, reveals itself here. The "play of musement" fascinates him. It is that familiar matter of musing, pondering, contemplating, engaging in reflection, rumination, speculation. Musement is not to be trivialized, as work tends to trivialize play, as logic trivializes ambiguity, industry trivializes craftsmanship, reason trivializes polyvocality, and science trivializes the arts, in our western tradition. Musement led Tom (1981: 16) "to excitingly novel encounters at the borderline of biology and semiotics, in frequently surprising, sometimes relishingly controversial, but most often unfamiliar meeting places in the Universe of contemporary experience". Throughout the essays of this book, *The Play of Musement*, he emphasizes the nonverbal background of verbal signs that is most prevalent in the arts, in addition to play. This notion eventually guides us to the nature of *contemplation*.

Sympathetic resonances, invisible harmonies

The contemplative mode, most characteristic of non-western cultures, highlighted in the arts and mysticism, challenges some of the basic assumptions of the West. It stresses spontaneity, desirelessness, purposelessness, and delight in the momentary, all of which is alien to our work ethic. Contemplation thus entails some risk. It is a Trojan Horse whose belly hides certain enemies of present-day academia and modern life: objectivity, logical acumen, intellectual rigor, stolid and sober demeanor, and clear and distinct, consistent and hermetic, language. Contemplation is itself a vague word. It spans opposites; its meanings embrace inconsistencies; it is a paragon of open-endedness; it invites creativity.

In fact, Table 1 apparently contrasts bivalent thinking with triadic thinking. But that's not really what the table is about at all. Triadic thinking *contains* bivalent thinking. So they are complementary rather than oppositional. It's like *Yin-Yang's* further development of the notion of mere black/white. What we see in this table is that age-old dichotomy established between work and play, or better, between dyadicity and tria-

Table 1

Bivalent Euclidean, Cartesian	Triadic Non-Euclidean, Non-Cartesian
Abstract	Concreting → Abstracting
Objectivity	Contemplating → Subjectifying → Objectifying
Linear	Non-Linearizing
Sequential	Self-Organizing
'Logical'	'Logiquing, Becoming'
Symmetry, Oppositional	Asymmetry, Syncopation, Mediated Harmony
Laws-Rules-Strategies	Improvising → Performing
Individual-Autonomy	Interdepending-Interrelating-Interacting
Efficiency, Organization	Disorderly (of Surface Appearance)
Product, Practical	Processing, Creative
Representation	Self-Sign + Other = One (Oneing → Manying)
Purpose, Achievement Oriented	Apparent purposelessness
Secondness prioritized	Firsting + Seconding + Thirthing
Glottocentric (sequential operations)	Multitasking
Spatial	Temporalizing-Spatializing
Mind/Body	Bodyminding
Global	Localizing → Globalizing
Competition, Antagonism	Complementarity
Warrior Spirit	Celebration of Life
→ Totalitarian	Egalitarianizing

dicity. Work aids and abets oppositional forces at the left side of Table 1. Play loosens these interrelations, freeing them for creative flights of imagination. Work prioritizes, dogmatizes, totalizes. Play brings would be opposites together in resonant harmony. Work excludes; play includes. Work is a zero-sum game; play brings about no absolute division between winners and losers. In sum, bivalence is slog ethic. Triadicity, celebrating musement and play ethic, also celebrates life. The trivialization of muse-

ment and play was work ethic's most lasting and most regrettable achievement (Carse 1986).

When anthropologists first visited the !Kung bushmen in Africa, they were struck by the leisure time those people enjoyed. Hunting and gathering and domestic chores accounted for a few hours each day, and then it was time for socializing and lounging. In contrast, work in our rapidly globalizing world could hardly survive on a mere four hours each day. We are maxed out and overwhelmed by labor. Something is surely out of balance. We aren't the affluent society at all. The !Kung bushmen have us beat in that category by miles (Shostak 1981).

Pat Kane's book, *The Play Ethic* (2005) argues for an alternative counterweight to the hard-nosed, laborious, workaholic madness that consumes our contemporary world. Perhaps surprisingly, when our customary notion of the work ethic is juxtaposed with the play ethic – as a “slog ethic” in contrast to a “musement ethic” – we have binarily oppositional thinking in contradistinction to processual, triadic thinking, as illustrated in Table 1. The work ethic is imperialistic, oppressive and tyrannical. The play ethic involves creative flux and flow. This is not to say that the work ethic gives quantitative results while the play ethic in comparison produces little of practical value. It is to imply that throughout our history those who have been most innovative have practiced the creative play ethic. Work needs play. Without counter-balancing play, work becomes pathological. Play not only keeps us happier; it is the road to novel theories, ideas, methods, and strategies. Play also benefits from work. Add a touch of rigor to play, and you can take it to new levels. When work and play find the proper balancing act, the harder we work or play, the more fun we have and the more we accomplish.

How better to illustrate the *Yin-Yang* complementarity rather than dualism of work and play than in that most rigorous of sciences, physics? For example, physicist Richard Feynman was constantly engaged in ludic pastimes. He had an exuberantly playful style that endeared him among colleagues and attracted large audiences. At work he played practical jokes on all those in his midst, and in bars he played around with his equations while engaging in typical barroom banter. No place was sacrosanct nor was any place uncondusive to work in his chosen profession. What should ordinarily be play was work, and when at work, play was always on the agenda (Gleick 1992).

Examples of the work-play mergence abound. To mention only three of them, Charles Dodgson, better known by his pseudonym, Lewis Carroll,

was stodgy when teaching his classes on logic. Outside the classroom, he diddled away his time with nonsense poems and jabberwocky (Leahmann 1972). Mavrits Escher once remarked: "I can't keep from fooling around with our irrefutable certainties. It is, for example, a pleasure knowingly to mix up two-and three-dimensionalities, flat and spatial, and to make fun of gravity" (1989: 21–22). And Roger Penrose playfully combined Escher-like impossible objects with principles of physics. His aperiodic five-fold tiling dramatically illustrates nature's refusal to become absolutely symmetrical (Penrose 1989). Play, all.

At any rate, Tom's interest in the "play of musement" is a *first key* to his interpretation of semiosis.

Tom's anti-glottocentrism

We find a *second key* in Tom's argument against glottocentrism. In his contribution to *A Perfusion of Signs* (1977: 180–206), he alluded to the two traditions within the field of semiotics. The "minor tradition", which is "parochially glottocentric, asserts, sometimes with sophistication but at other times with embarrassing naïveté, that linguistics serves as a model for the rest of semiotics", while the "major tradition" that Tom labels "ecumenicalism" holds that semiotics encompasses "the entirety of our planetary biosphere" (1977: 182). He finishes his essay with the suggestion that "ecumenicalism" touches on "the pursuit of boundaries and of ways of transcending them. I believe that in semiotics, as in so many other areas of intellectual endeavor, the imaginative and sometimes intuitive search for invariance must go hand in hand with the empirical scrutiny of variation" (1977: 201). (These words, I might add, encapsulate what, thoroughly inspired by Tom, I have clumsily dubbed "linguicentrism" in my semiotic work [merrell 2000, 2003, 2004].)

When Peirce's signs – specifically from among his basic ten classes – are outlined, it becomes evident that iconicity and indexicality pervade the most fundamental, vital, and basic signs. In fact, only the last three signs of his Decalogue might be considered full fledged and genuine linguistic signs: *rhetic symbolic legisigns* (Representamen-Thirdness, Semiotic Object-Thirdness, Interpretant-Firstness, a *Term* or *Word*), *dicent symbolic legisigns* (Representamen-Thirdness, Semiotic Object-Thirdness, Interpretant-Secondness, a *Proposition*, *Sentence* or *Utterance*), and *argument symbolic legisigns* (Representamen-Thirdness, Semiotic Object-Thirdness, Interpretant-Thirdness, an *Argument*, or *Text*) (see Table 2).

Table 2

R ₁ O ₁ I ₁	<i>rhematic iconic qualisign</i>	A sensation of ‘blue’
R ₂ O ₁ I ₁	<i>rhematic iconic sinsign</i>	A self-contained diagram
R ₂ O ₂ I ₁	<i>rhematic indexical sinsign</i>	A spontaneous cry, a surprise
R ₂ O ₂ I ₂	<i>dicent indexical sinsign</i>	A weathervane, a barometer, smoke for fire
R ₃ O ₁ I ₁	<i>rhematic iconic legisign</i>	A diagram, apart from its self-containment
R ₃ O ₂ I ₁	<i>rhematic indexical legisign</i>	A demonstrative pronoun, linguistic ‘shifters’
R ₃ O ₂ I ₂	<i>dicent indexical legisign</i>	A commonplace evocation or expression
R ₃ O ₃ I ₁	<i>rhematic symbolic legisign</i>	A term, or word
R ₃ O ₃ I ₂	<i>dicent symbolic legisign</i>	A proposition, sentence, or utterance
R ₃ O ₃ I ₃	<i>argument symbolic legisign</i>	An argument (syllogism), or text

All those signs that precede the eighth, ninth, and tenth signs of the Decalogue have their hopes on a culminating Thirdness of their three components so that they, too, can become genuinely symbolic. A worthy dream, no doubt. However, those imperious symbolic signs probably don’t realize that, without their iconic and indexical forebears, they are empty, though at the same time those iconic and indexical signs, without symbolic signs, are basically devoid of any purposeful function.

This might lead one to surmise that symbols without icons and indices are empty, while icons and indices without symbols remain in limbo until they can potentially be given some form or other of symbolic window dressing. But not really. Icons and indices are chiefly signs of feeling, sensation, and unmediated experience. As such, they bear plenty of meaning – tacit, unarticulated, meaning of body, heart, and gut – that can be only partly articulated. As Michael Polanyi’s (1958) dictum has it: *we always know more (tacitly, iconically and indexically speaking) than we can tell (symbolically speaking).*² So, once again, why not language as a *tertiary modeling process?*

2. In various publications I have attempted to bring Polanyi’s “tacit knowing” in line with Peircean process philosophy of signs (see especially merrell 2002, 2006, 2007).

After all, in a perusal of Table 2, we have, according to Peirce, a continuous transition from signs of iconic nature to signs functioning indexically to signs that are indelibly symbolic. If iconicity is primary and indexicality is secondary, then symbolicity must be tertiary. Actually, Tom alludes to *tertiary modeling processes* as “true culture”, requiring “a system of representing all the subtleties of language”. Thus he argues against Juri Lotman (1977) and the Moscow-Tartu group, who dubbed language a “primary modeling system” and referred to culture as a “secondary modeling system”. It is at this cultural level, defined by Tom as *tertiary*, that (iconic and indexical) nonverbal and (symbolic) verbal sign-assemblages merge in the “most creative modeling that nature has thus far evolved” (1981: 58).

However, with due respect to Tom, if iconicity, indexicality and symbolicity are primary, secondary and tertiary respectively, then culture's excruciatingly complex composite sign conglomerate must be something else. A *quaternary modeling process* perhaps? Something akin to a four-dimensional timespace continuum? This is a long stretch of the imagination. Too much musement for comfort. Yet, I'm compelled to pursue the possibility.

Timespace semiosis, anybody?

Let's reconsider the hypoicon notion. As prefigurements of full blown signs, hypoicons, consisting of (1) images, (2) diagrams, and (3) metaphors, progress from *interdependent likenesses* to *interactive signs and their respective others* to *interrelative symbolic signs mediating between their predecessors*. Put these three semiotic processes together, and we have the fundamental making of Peirce's sign Decalogue in Figure 1 above, which can effectively account for the entire spectrum of cultural signs. But I'm getting ahead of myself. Best I slow down a mite and take things as they come.

Tom's assertion that semiotics includes “the entirety of our planetary biosphere” and his continued pursuit of “biosemiotics” is a point well taken, and it has motivated much fruitful work, details of which I will not go into here. The issue I wish to take up is more basic than the biological underpinnings of semiotics, namely, the topic mentioned above, equally fascinating for Tom, of physics and its import for the concept of the sign. The implication of a continuum from “physico-semiotics” to “chemico-semiotics” to “bio-semiotics” is implicit in Peirce the chemist,

whose interest in the physics of his day emerges throughout his writings, and it is inherent in quantum physicist Max Born's words (1951: 1):

[W]e distinguish between living and dead matter: between moving bodies and bodies at rest. This is a primitive point of view. What seems dead, a stone or the proverbial "door-nail", say, is actually forever in motion. We have merely become accustomed to judge by outward appearances; by the deceptive impressions we get through our senses. We shall have to learn to describe things in new and better ways.

What appears "dead" is "dead" only when it is isolated from everything else. When what is "dead" comes into interdependent, interrelated interaction with everything else, it, along with everything else, takes on the restless, fluctuating, vibrating, scintillating character of the entire universe. It wasn't "dead" at all. At its most basic form it is of the same nature as what is apparently "not-dead". When "dead", its countenance was that of *iconicity*. When coming into interdependent interaction with something else, it embraces *indexicality*. When interrelating with everything in its possible reach, it enters into *symbolicity*.

Iconicity is self-contained, self-reflexive, virtually self-sufficient, scintillating, oscillating, undulating unicity, or singularity. It is replete with possibilities. Possibilities of what? Of breaking out of its self-contained prison. It cries out for otherness. Iconicity, or the Firstness of semiosis is like a point that stretches itself out by engendering an infinity of points and then doubling back on itself and connecting with itself to form a circle, distinguishing what is inside from everything that is not inside.

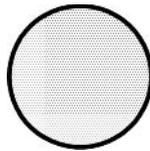


Figure 2.

It consists of a one-dimensional self-enclosed line that marks out a two-dimensional piece of space. It is what it is: that piece of space, in contrast to everything else on the sheet where it rests. That "everything else" is other, otherness, but it is otherness of pure possibility – as the icon itself was pure possibility, until it self-organized into what it now is. Now its task is that of selecting from the unselected, which consists of everything possible except itself, which was already self-selected. Once a selection is made, then the icon enjoys the presence of some *other*.

Getting concretely at the issue

But I'm hedging. I'm enclosing and binding the topic I intend to develop, while evading the issue. What I've written indirectly alludes to Tom's implication that Wheeler was influenced by Peirce – via personal conversation (Sebeok 1991b: 48) – and that Wheeler's concept of "meaning physics" is germane to semiotics. Let me illustrate this with a story, which, I would suggest, drills to the core of the Peircean concept of the sign. It begins with *borders*.

Within that cloudy manifold of multiply variegated cultural flows, there is that faddish concept embedded within what goes as "cultural studies": *borders*. The problem is that the customary treatment of "borders" in "cultural studies" all-too-often falls prey to *this-side|that-side*, *local/global*, *us/other*, and comparable modes of thinking. Processualization of this binarist conundrum might be found in physicist John Archibald Wheeler's allusion (1990: 1) to Minerva's counsel: "The secret of the grip lies in the boundary of the boundary". Boundary? Border? Perhaps they are of some common nature. Wheeler tells us that a line, like the boundary or border of Nicholas of Cusa's limit of the universe, in its ultimate extension ultimately doubles back and meets itself. It is a one-dimensional manifold whose starting point – of zero dimensions – and whose end point is one and the same. No easy answer here. Perplexity grows. Yet, common sense would seem to tell us that the end point of a line is a positive "payoff" and the beginning is a negative "incurred debt". When they meet they cancel each other out, and we are left with nothing. Is this a "no pain, no gain" situation? No. After the pain, with expectations high, and after traveling the long road promising unlimited gain, there's actually nothing but a handful of nothing. No winners, no prizes, no euphoria. There's just nothing.

So that must be the reason I've placed an infinitesimal point at the center of Peirce's tripod diagram in Figure 1. The geometrical point is the mathematical equivalent of zero, nothing, emptiness. It is the point at which everything that *is* – the positive integers – becomes distinguished from everything that *is not* – the negative integers. It precedes Firstness and Secondness. It is the Great Bifurcator granting us our individuality with respect to the world, for otherwise we would be one with that world. We are *individuals*, thanks to that distinction setting us off from what we *are not*.

After all, what is a boundary, a border? Nothing more than a line of demarcation describing a two-dimensional area (Figure 2). The line begins

with a point that stretches itself out, thus forming a line that doubles back on itself to end where it began. It is a dimensionless point within a one-dimensional line forming a two-dimensional area within three-dimensional space that can be contemplated from within what appears to be a flowing dimension of time. The line ends by meeting itself at its extremities and eating itself. The yield? Zero! Taken as a whole, everything collapses into nothing, emptiness, zilch.³

Geometrizing semiosis?

Well, then, where can we go from there? Into the next dimension. If we stack an infinity of Figure 2 borders one on top of the other, we have a two-dimensional band in three dimensional space (Figure 3). But we didn't need to engage in such a tedious exercise. All we needed do is create from the bordered space the symbol for infinity. Another simple self-returning line, it would appear (Figure 4). Not so simple, however. The line is a mere dimension, infinitesimal in thickness. But it crosses itself.

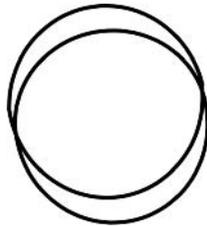


Figure 3.

Such crossing promises the becoming of something very slightly more than mere infinitesimality: it is the bare beginning of two-dimensional space, metaphorically speaking – or literally speaking, if we are thinking of *fractals*. Does the line go over itself or under itself when completing the act of crossing? Both and neither, we might wish to say. That is, it is impossible to say with certainty. The image is ambiguous. The line can be either over or under itself, depending on the way it is contemplated. We move our contemplation up a notch, spatially speaking. And what do

3. “Emptiness”, as I use the term here, hearkens from Asian philosophy, most specifically Buddhism, to which Peirce occasionally alluded (see Huntington 1989, Kalupahana 1986, Loy 1989, Nishitani 1990, also merrell 2002, 2003). For commentary on “emptiness” and contemporary western science, see Cole 2001. For the enigmas of the concept of “zero”, see Seife 2000.

we have here? The enigmatic Möbius band, a sort of two-dimensional rendition of the infinity symbol. The band can be easily constructed by taking an elongated two-dimensional strip, twisting one end of it in three-dimensional space, and connecting the extremities.

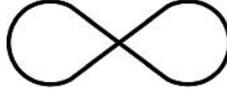


Figure 4.

If we place a point anywhere on the band, is that point inside the band or outside? Both, and neither, however we wish. The band has no simple inside or outside. It did when it was a simple two-dimensional object. But no longer. The twist in three-dimensional space unified inside and outside. Actually, did we not create the same phenomenon upon connecting the line to construct the infinity symbol? The line of crossing is either over or under, according to our classifying the phenomenon and saying it. For, just as the Möbius band is two-dimensionality in three-dimensional space, so also the infinity symbol is one-dimensionality in two-dimensional space.

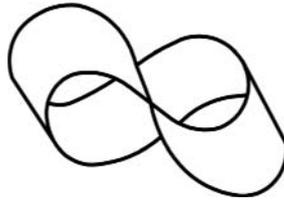


Figure 5.

Suddenly an idea pops up. What if we squash the Möbius band? We do so (Figure 6). And what do we now have? It is what can be taken as a two dimensional area – that is, if we disregard the interior lines of demarcation. The problem is that those very lines of demarcation belie our effort to conceive the object as a mere two-dimensionality. Well then, what if we stack up layer after layer of this apparently two-dimensional object? After an infinity of such stackings, we could be left with a “Penrose triangle”, so named after physicist Roger Penrose, its creator (Figure 7). This object is a sort of three-dimensional rendition of the Möbius band. A point on the triangle is both inside or outside, according to how we take it. And how do we take it? In what would appear to be the blink of an eye, in an instant. But before the taking and after the taking the flow of consciousness has occurred.

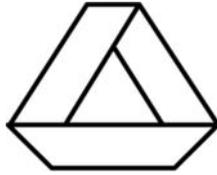


Figure 6.

There was no instantaneous grasp of what was there for our taking and our classification and enunciation of a particular piece of our world. For we are in the flow, where there is neither upside nor downside nor inside nor outside until we perceive it and conceive it and say it is so. It is we who pull the objectivity of our world into apparent existence through the diverse ways of our taking our world.

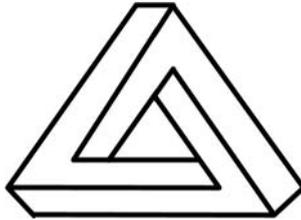


Figure 7.

Time enters the scene

That much considered, during a few moments of idle speculation, we happen unthinkingly to doodle out a Necker cube (Figure 8). Ah, yes, that must be it! We have either a cube with the face up or down, or both, or neither. We might see it first as one of the cube's two possible ambiguous forms, then as the other form, apparently in the blink of an eye.

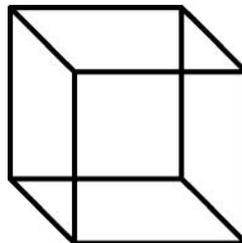


Figure 8.

But wait a minute! Between the first seeing and the next seeing, what is there? A lapse, an increment. Time enters the scene. Time: that elusive old customer that just keeps flowing along. If between the two seeings there is a temporal pulse, commonsense would seem to tell us that the seeings are in the flow. First we see it. Then we select the image before us as a foregrounded object from its background, and we see it as something or other. Then, and only then, do we categorize it as something that is what it is because it reveals certain characteristics to us that are typical of the class of something to which we assume it belongs. Well and good, it would seem.

To our dismay, uncertainty sets in. Our basic problem remains. What about time, in this grand scheme of things? We contemplate the broken line along the never-ending surface of the Möbius band. What can we make of it? We place a pencil at any point in the line and we trace out a path, on and on, until we reach our point of departure (see the broken lines on the Möbius band of Figure 9).

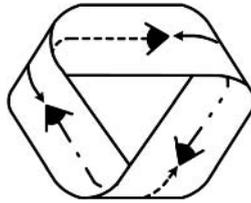


Figure 9.

In the process we passed from inside to outside within three-dimensional space. Did we not? We must have, since any two-dimensional object must have one side and the other side.

So, where is the border separating inside from outside on the band? Why, it can be anywhere! It can be in an infinity of places. Wherever we decide it is, that's where it is, at least for us. For a virtual infinity of other observers, it could be in an infinity of other places. Where is the ultimate border, the border of borders? It must be in all places, and at no place, as the pure possibility for any and all borders. It must be everywhere and nowhere (contemplate Figure 10).

Where's the actor-co-participant?

You've obviously noticed the all-seeing "Eye" in Figure 9, that continuously passes from inside to outside, and vice-versa. While within the band – it's two-dimensional universe – the Eye travels from what is

for us – three-dimensional participants – a series of transformations in three-dimensional space.

Of course we can see the Eye's entire trajectory within the band in one perceptual grasp. In contrast, the Eye enjoys no such vantage point. It's only claim to three-dimensionality is by way of its two-dimensional world plus a dimension of time, as it scoots along within the band. We are only a step more fortunate, however. For we are outside the Eye's world in three-dimensional space, but we have no vantage point beyond that except for our own dimension of time. This is like Hermann Weyl's description of our consciousness within Einstein's rendition of the four-dimensional timespace continuum. The Einsteinian universe (Weyl 1949: 116): "simply *is*, it does not *happen*. Only to the gaze of my consciousness [recall Penrose's words on consciousness], crawling upward along the lifeline of my body, does a section of the world come to life as a fleeting image in space which continuously changes in time".

Ah, so that must be it! The border of borders must be the absolute zero sign or emptiness, the fountainhead for any and all signs, from $R_1O_1I_1$ to $R_3O_3I_3$ (see Table 2) for anybody and everybody anywhere and anywhen (Rotman 1987). And as pure possibility, emptiness, it must be atemporal. Then, once again, where does time come in? Semiotically speaking, it must emerge with consciousness becoming in complementarity with the becomingness of signs within consciousness from $R_1O_1I_1$ to $R_3O_3I_3$. The border of borders makes up the grand continuity holding all that is possible. The consciously becoming, co-participating semiotic agent becomes the author of breaks and fissures in the continuity giving rise to some particular selection from the continuous, nonselected universe of possibilities. The border provides for our sense of time within the continuum, and time and consciousness of time come into full play with the emergence of Thirdness (Hartshorne 1970).

So continuity there always is, it would seem. Discontinuity is the result of artificial samplings from the continuous whole by some co-participating consciousness. Continuity is the range of all possibilities for cuts and joints making up semiotic worlds; discontinuity defines particulars within those worlds. Continuity is always there for selection; discontinuity is selected from the nonselected. From continuity, particulars are actualized; actualization of particulars over and over again forms collections of particulars into general wholes that are discontinuous with respect to one another. From the continuous range of possibilities come basically self-contained signs of iconicity ($R_1O_1I_1$, $R_2O_1I_1$, $R_3O_1I_1$). These signs become inter-related with their respective makers and takers "out there" to become

signs of indexicality ($R_2O_2I_1$, $R_2O_2I_2$, $R_3O_2I_1$, $R_3O_2I_2$). And those signs in turn take on articulation, especially within communities of human semiotic agents, as signs of symbolicity ($R_3O_3I_1$, $R_3O_3I_2$, $R_3O_3I_3$). Perhaps it's all beginning to make sense. Perhaps. But, . . .

How can the whole concoction be “many” and at the same time “one”?

The question remains to haunt us. Our ruminations eventually veer toward Wheeler once again. He visualizes a three-dimensional border within a four-dimensional region consisting of a dimension of time for two-dimensional or three-dimensional observers inside their respective spaces. And he depicts this bordering with a timeless series of cubes, the combination of which yields a “hypercube” (Wheeler 1990). What do we have here that may help us out?

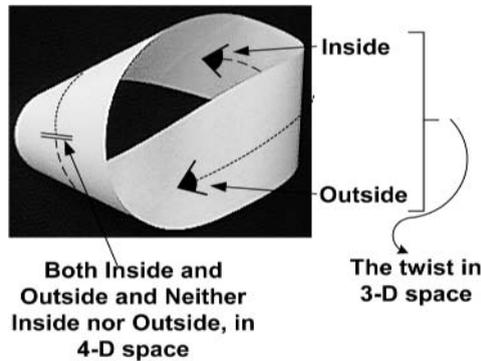


Figure 10.

We ponder the set of cubes (Figure 11). There are eight cubes that flash back and forth and in and out, in a gleaming, scintillating, oscillating flux of virtual possibilities. Why, this must be the makings of Peirce's Firstness. The eight possible cubes have exploded from the central point and the hypercube of possibilities, giving us virtually countless possibilities for sensing the world, perceiving the objects, acts, and events of the world as so-and-so, and conceiving that they are what they are because they are conceived in terms of their evincing such-and-such a set of qualities.

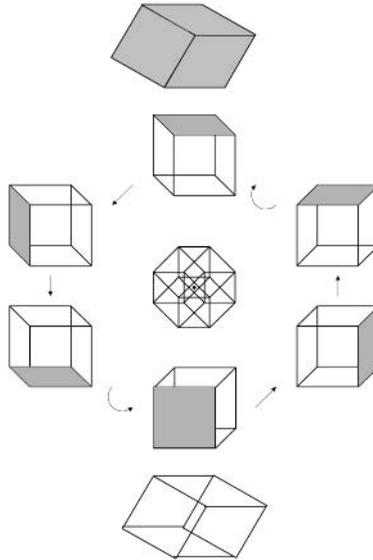


Figure 11.

These possibilities involve the becomingness of three-dimensional signs within a four-dimensional timespace manifold. But what's important in Figure 11, as far as we three-dimensional semiotic agents are concerned? We squint our eyes in an attempt to make it out. The implication seems to be this: we exist within our customary three dimensions of space, and, to boot, a dimension of "imaginary" time that becomes within our consciousness "real" psychological time. The trajectory of our consciousness within this four-dimensional timespace manifold traces a "world-line" or "life-line", as we carry on with our daily affairs. The entire timespace manifold is one, including ourselves. It is self-contained, and it contains the range of all semiotic worlds constructed by all semiotic agents within their respective cultures. So there is One: the continuous range of possibilities. And there are Many: selected particulars from the continuous range of possibilities.

But surely that is not all. The importance of Figure 11 must be even more basically this: Wheeler (1980b) tells that two-dimensions are where the action is. Two dimensions? How so? We are of three dimensions, not mere Flatlanders living out their life on a plane (Abbott 1952). But do we not present ourselves as a two-dimensional wrapping within three-dimensional space? Do we not look out into our world, and we basically see two-dimensional surfaces that our parallax vision allows us to three-dimensionalize? Do we not listen to linear streams of compact and diffuse

pockets of air? Do we not smell and taste essentially the chemical yield of two-dimensional surfaces? Is not our sense of touch that of contoured surfaces? Only our kinesthetic and proprioceptive senses involve our moving about in three-dimensional space. What does all this sensing and perceiving consist of? Reception through the sensory channels within the one-dimensional temporal stream. And what is our role in all this as proud, imperious semiotic agents? Why, it must be that term that has occasionally popped up in this essay: *co-participation*. We aren't outside, neutral observing agents at all. We are in *co-participation* with our world in the process of its becoming.

Our indelible role as co-participants is nowhere more evident than in Niels Bohr's work – to wit, a quote Tom occasionally cites (Bohr 1949: 236): “The development of atomic physics, which forces us to an attitude toward the problem of explanation recalling ancient wisdom, that when searching for harmony in life one must never forget that in the drama of existence we are ourselves both actors and spectators”. The underlying assumption is that, as Erwin Schrödinger puts it (Schrödinger 1945: 91):

[T]he “real world around us” and “we ourselves”, i.e., our minds, are made up of the same building material, the two consist of the same bricks, as it were, only arranged in a different order – sense perceptions, memory images, imagination, thought. It needs, of course, some reflexion, but one easily falls in with the fact that matter is composed of these elements and nothing else. Moreover, imagination and thought take an increasingly important part (as against crude sense perception), as science, knowledge of nature, progresses.

This Peircean sort of “cosmic oneness” suggests that we (Spencer-Brown 1979: 104–105):

consider for a moment, the world as described by the physicist. It consists of a number of fundamental particles which, if shot through their own space, appear as waves, and are thus of the same laminated structure as pearls or onions, and other wave forms called electromagnetic which it is convenient, by Occam's razor, to consider as traveling through space with a standard velocity. All these appear bound by certain natural laws which indicate the form of their relationship.

Now, the physicist [her-]himself, who describes all this, is, in [her-]his own account, [her-]himself constructed of it. [S]he is, in short, made of a conglomeration of the very particles [s]he describes, no more, no less, bound together by and obeying the general laws as [s]he [her-][him-]self has managed to find and so record.

That story must be mind-bogglingly complex. Why bother? Our stubbornness compels us, however. We decide to forget about space and time for the moment and attend to our co-participatory nature.

A playful account

Fortunately, Wheeler gives us a remarkably down-to-earth example, consisting of a joke about three baseball umpires comparing notes in the local bar. The first umpire confidently proclaims, “I calls ’em the way I sees ’em”. The second one counters, “I calls ’em the way they is”. The third umpire brashly claims, “Hell, they ain’t nothin’ till I calls ’em”.

The moral to the story falls in line with Wheeler’s quantum theoretical concept of the world. It is *co-participatory* through and through. Following his wise master, Niels Bohr, Wheeler puts forth the idea that no aspect of “reality” exists for someone until it has come into *interdependent, interrelated interaction* with that someone and with some other aspect of “reality” – from within the four dimensional timespace manifold, of course.⁴ As mentioned above, Tom was impressed with what Wheeler labeled “meaning” physics. Meaning, “which is indeed a pivotal term in semiotics,” Sebeok notes (1991a: 14), “played a crucial part in Niels Bohr’s model of a participatory universe, and significance has moved to center stage in the work of such contemporary theoretical physicists as Wheeler”. A given aspect of the world does not become what it *will have become* (the future conditional is of utmost importance) until some mediating, *co-participating* agent – in our case humans – distinguishes it from its background and gives it some significance or other. Then, and only then, *will it have become* such-and-such in contrast to any and all alternatives that *possibly might have become* or *likely could have become* in another context. This notion, Tom points out (1991a: 84–85), is semiotic through and through.

Therein, we conjecture, must lie part of our answer. We are like the third ump. We *co-participatingly* collaborate with our universe in the

4. In Arthur Eddington’s words (1935: 200–201): “Where science has progressed the farthest, the mind has but regained from nature that whch the mind has put into nature. We have found a strange foot-print on the shores of the unknown. We have devised profound theories, one after another, to account for its origin. At last, we have succeeded in reconstructing the creature that made the foot-print. And Lo! it is our own.”

process of its becoming, in *our* process of becoming, in *our signs'* process of becoming. Wheeler's quantum universe points us to the universe of signs becoming signs, that is, to the universe of semiosis (see Wheeler 1980a, 1980b, 1990, 1994, Skolimowski 1987). The watchwords are: *interaction* – between semiotic agents and their world – which implies the *interdependence* and *interrelatedness* of everything the universe has to offer, including ourselves (for more on the three italicized terms, see merrell 2003, 2004).

We *co-participate* with this “semiotic reality” and pull it into existence, and without us “reality” remains “dormant”, we remain “dormant”. The first umpire thinks what he sees is what there is. The second umpire thinks what there is, is what it is, whether he sees it or not; but when he sees it, he sees it just as it is. The third umpire is more elusive. She discounts the notion that there is something “out there” to be determinately seen by the knowing subject set apart from the known. She is aware of her collaboration with her world to bring some particular aspect of it into existence by her act of *co-participating* with it.

Is she simply creating an illusion and interpolating it into the world? Yes, and No, at least for her. Yes, because what she sees, she sees. What she sees she has created, and it becomes that particular aspect of the world as she has so created it. Her world is more fabricated than merely found. At another time and place she might have seen her world in a slightly different way. Or, at the same time and place, perhaps somebody else might have created a slightly to radically different aspect of the world. But at the same time the answer to the question is No, because her creation of her world is not from some supreme, detached “view from nowhere”.

She *co-participates* with the world just as the world *co-participates* with her. They are *interdependently, interrelatedly, interactively* intertwined. The upshot is that the world is a *co-participatory creation*, and a *co-participatory creation* is just that: something that could always have been becoming something other than what it was becoming – from within the sphere of Firstness.⁵ Wheeler's quantum interpretation entirely demolishes the old division of mind and world, and the assumption that mind, if on the right

5. In Wheeler's words with respect to the quantum world (1998: 339–340): “Measurement, the act of turning potentiality into actuality, is an act of choice, choice among possible outcomes. After the measurement, there are roads not taken. Before the measurement, all roads are possible – one can even say that all roads are being taken at once”.

track, can faithfully “mirror” the world. This implication afforded by quantum theory was implicit in earlier interpretations, for example, in Heisenberg’s observation (1955: 29) that:

the Cartesian difference between *res cogitans* and *res extensa* . . . is no longer a suitable starting point for our understanding of modern science. Science, we find, is now focused on the network of relationships between [wo-]man and nature, on the framework which makes us as living beings dependent parts of nature, and which we as human beings have simultaneously made the object of our thoughts and actions. Science no longer confronts nature as an objective observer, but sees itself as an actor in this interplay between [wo-]men and nature. . . . In other words, method and object can no longer be separated. *The scientific world-view has ceased to be a scientific view in the true sense of the word.*

Does this not make shambles of any and all efforts toward semiotically modeling the flabbergasting complexity of our world? Briefly back to Tom, again.

Might it be possible to go where he didn’t go?

In a discussion of linguist Yuen Ren Chao, Tom considers *cabbage* as the model for *king*. Granted, they have little in common. But even though their commonality is fairly low, it can never be zero. Semiotically speaking, “a cabbage (*aliquid*) stands for (*stat pro*) a king (*aliquo*)”.

In bringing the two terms together as *modelans* and *modelandum*, what is true of one is true of the other. Tom suggests (Sebeok 1991a: 51 – brackets mine, taken from Table 2) that we:

amplify, with Peirce (CP 2.257), that the cabbage tends to be a Dicent Sinsign [222], involving both “an Iconic Sinsign [211] to embody the information and a Rhematic Indexical Sinsign [321] to indicate the Object to which the information refers”. However, if very little is true of one that is also true of the other (even though it isn’t entirely zero), one might say, again with Peirce (CP: 2.261), that the cabbage tends to be a Rhematic Symbol [331] or a Symbolic Rheme, such as a common noun.

Finally, I would suggest, we find a *third key* implicit in Tom’s interpretation of semiosis. If we once again take Peirce’s entire Decalogue of signs into account, as in Table 2, we begin with iconicity and continuously move to indexicality and symbolicity. The signs of the Table subscripted

as 111, 211, 221, and 311 are chiefly, though not exclusively, iconic in nature. In other words, we begin with a cabbage image (111) and it begins the path toward increasing explicitness in the mind, flowing through 211, 221, and 311, which is a diagram attuned to some other, that other of indexicality beginning to become more prominent with 222, and then flowing through 321 and 322, finally reaching the first primarily symbolic sign with the word “cabbage”. This makes up the first leg of the tripod, Firstness or the Representamen. Then the same process comes about along the second leg, finally yielding the symbol “king” to compose the second leg, Secondness, or the semiotic Object. We as co-participant interpreters in the same fashion move from iconicity to indexicality to symbolicity in regard to the third leg, Thirdness, or the Interpretant, as the entire tripod diagram (Figure 1) swerves and swings and wobbles gyratingly toward its development as a genuinely mediated sign: “Kings \approx Cabbages”.

If we limit our construal of semiosis to binarity, much like the left side of Table 1, we would remain within linearly developing linguistic signs. “Kings” would be “kings” and “cabbages” would be “cabbages”, and that’s that. Time would be serial: simply one damned thing after another. As such, there would be little to no opportunity for our bringing different images, diagrams, and metaphors together and mediating between them to create novel signs. Distinctions would be as if set in concrete; they would resist our every attempt to dislodge them. In contrast, if we place these signs within the nonlinear, synthesizing, moderating and mediating setting, namely, the right side of Table 1, we can get a glimpse of the entire range of possible cultural signs: a *quaternary modeling process*.

Such a process actually seems quite natural, since (as implied by the words surrounding the figures in this essay) one-dimensional self-containment, or Firstness, commensurate with iconicity, plus a dimension of time, introduces us to two-dimensional signness and otherness, or Secondness, commensurate with indexicality, plus a dimension of time leads us to three-dimensional mediation between whatever there is and its other, and between that selfsame agent of mediation and the mediated pair, or Thirdness, commensurate with symbolicity. Interject the function of time into the process, and each of these triads become intertwined. A twist of the circle in 2-D space gives the image of infinity, an impossible object if contemplated from within 1-D space; a twist of the band in 3-D space gives the Möbius strip, an equally impossible object from the limited vantage point within 2-D space; three-dimensionalizing the Möbius strip in 4-D space yields the Penrose triangle, which, like the hypercube, is an

impossible form as we perceive it in our own 3-D space. The quaternary process holds in its liquid embrace all three modeling processes as we know them within our familiar form of life during our daily coming and going.

Thus we learn from Tom's "Wheeler connection" that from emptiness, or zero, the trio of semiotic modes – 1-dimensional iconicity, 2-dimensional indexicality and 3-dimensional symbolicity – *interdependently, interrelatedly* and *interactively* emerge, within the flowing, fluctuating, always-changing time-line, making way for the possibility of *quaternary processual* "cultural signs".⁶

References

- Abbott, Edwin A.
1952 *Flatland* (New York: Dover).
- Bohr, Niels (1949)
"Discussion with Einstein on Epistemological Problems of Atomic Physics", in *Albert Einstein, Philosopher-Scientist*, ed. P. A. Schilpp (LaSalle: Open Court), 199–241.
- Born, Max
1951 *The Restless Universe* (New York: Dover).
- Brogie, Louis de
1939 *Matter and Light* (New York: W. W. Norton).
- Carse, James P.
1986 *Finite and Infinite Games* (New York: Free Press).
- Cole, K. C.
2001 *The Hole in the Universe: How Scientists Peered over the Edge of Emptiness and Found Everything* (New York: Harcourt).
- Eddington, Arthur S.
1935 *Space, Time and Gravitation* (Cambridge: Cambridge University Press).

6. As a final note, Tom once wrote that the idea of a "zero sign", if "taken literally", would be "oxymoronic" (1994: 18). I would agree. The word "zero" is a sign, but there is no "zero sign", strictly speaking. That is, zero is not yet a sign. However, I would also disagree with respect to the premises of this essay. Zero, emptiness, or the point at the center of the Peircean tripod in Figure 1, gives us an image of the possibility of all signs, which, in their composite form, makes up a sign: from *zero* to *infinity*. From zero, semiosis proceeds toward the infinite sign, somewhere, along that interminable asymptotic stretch. Actually, Tom's writings subtly imply as much.

- Escher, Mavrits C.
 1989 *Escher on Escher: Exploring the Infinite*, trans. K. Ford (New York: Harry N. Abrams).
- French, A. P. and P. J. Kennedy, Editors
 1985 *Niels Bohr: A Centenary Volume* (Cambridge: Harvard University Press).
- Gleick, James
 1992 *Genius: The Life and Science of Richard Feynman* (New York: Pantheon).
- Hadamard, Jacques
 1945 *An Essay on the Psychology of Invention in the Mathematical Field* (Princeton: Princeton University Press).
- Hartshorne, Charles
 1970 *Creative Synthesis and Philosophic Method* (LaSalle, IL: Open Court).
- Heisenberg, Werner
 1955 *The Physicist's Conception of Nature* (New York: Harcourt, Brace).
- Huntington Jr., C. W.
 1989 *The Emptiness of Emptiness* (Honolulu: University of Hawaii Press).
- Kalupahana, David
 1986 *Nāgārjuna: The Philosophy of the Middle Way* (Albany: State University of New York Press).
- Kane, Pat
 2005 *The Play Ethic* (New York: Pan Books).
- Leahmann, John F.
 1972 *Lewis Carroll and the Spirit of Nonsense* (Nottingham: University of Nottingham Press).
- Lotman, Juri M.
 1977 "Primary and Secondary Communication Modeling Systems", in *Soviet Semiotics*, ed. D. P. Lucid (Baltimore: Johns Hopkins University Press) 95–98.
- Loy, David
 1989 *Non-Duality* (New Haven: Yale University Press).
- merrell, floyd
 2000 *Tasking Textuality* (Berlin: Peter Lang).
- merrell, floyd
 2002 *Learning Living, Living Learning: Signs, Between East and West* (Ottawa: Legas Press).
- merrell, floyd
 2003 *Sensing Corporeally: Toward a Posthuman Understanding* (Toronto: University of Toronto Press).
- merrell, floyd
 2004 *Complementing Latin American Borders* (West Lafayette: Purdue University Press).

- merrell, floyd
 2006 *Living Learning: Crossing Borders and Pragmatizing Knowing with Paulo Freire and Charles S. Peirce* (Forthcoming, Atwood Publishers).
- merrell, floyd
 2007 *Processing Cultural Meaning* (Ottawa, Canada: Legas).
- Nishitani, Keiji
 1990 *The Self-Overcoming of Nihilism*, trans. G. Parkes (Albany: State University of New York Press).
- Peirce, Charles Sanders (10 September 1839–1914 April 19)
 i.1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Ficta Disjecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Penrose, Roger
 1989 *The New Emperor’s Mind: Concerning Computers, Minds, and the Laws of Physics* (Oxford: Oxford University Press).
- Polanyi, Michael
 1958 *Personal Knowledge* (Chicago: University of Chicago Press).
- Rotman, Brian
 1987 *Signifying Nothing: The Semiotics of Zero* (New York: St. Martin’s).
- Schrödinger, Erwin
 1945 *Nature and the Greeks* (Cambridge: Cambridge University Press).
- Sebeok, Thomas A.
 1977 “Ecumenicalism in Semiotics”, in *A Perfusion of Signs*, ed. T. A. Sebeok (Bloomington: Indiana University Press), 180–206.
- Sebeok, Thomas A.
 1981 *The Play of Musement* (Bloomington: Indiana University Press).
- Sebeok, Thomas A.
 1983 “One, Two, Three Spells UBERTY”, in *The Sign of Three*, ed. U. Eco and T. A. Sebeok (Bloomington: Indiana University Press) 1–10.
- Sebeok, Thomas A.
 1991a *A Sign is Just a Sign* (Bloomington: Indiana University Press).
- Sebeok, Thomas A.
 1991b *Semiotics in the United States* (Bloomington: Indiana University Press).

- Sebeok, Thomas A.
1994 *Signs: An Introduction to Semiotics* (Toronto: University of Toronto Press).
- Seife, Charles
2000 *Zero: The Biography of a Dangerous Idea* (New York: Penguin).
- Shostak, M.
1981 *Nisa: The life and words of a !Kung woman* (New York: Random House).
- Skolimowski, Henryk
1987 "The Interactive Mind in the Participatory Universe", in *The Real and the Imaginary: A New Approach to Physics*, ed. J. E. Charon (New York: Paragon), 69–94.
- Spencer-Brown, George
1979 *Laws of Form* (New York: E. P. Dutton).
- Weyl, Hermann
1949 *Philosophy of Mathematics and the Natural Sciences* (Princeton: Princeton University Press).
- Wheeler, John Archibald
1980a "Beyond the Black Hole", in *Some Strangeness in the Proportion: A Centennial Symposium to Celebrate the Achievement of Albert Einstein*, ed. H. Woolf (Reading MA: Addison-Wesley), 341–375.
- Wheeler, John Archibald
1980b "Law Without Law", in *Structure in Science and Art*, ed. P. Medawar and J. H. Shelley (Amsterdam: Excerpta Medica), 132–68.
- Wheeler, John Archibald
1988 "World as System Self-Synthesized by Quantum Networking", *IBM Journal of Research and Development* 32, 1–15.
- Wheeler, John Archibald
1990 *A Journey into Gravity and Spacetime* (New York: Scientific American Library).
- Wheeler, John Archibald
1994 *At Home in the Universe* (New York: American Institute of Physics).
- Wheeler, John Archibald
1998 *Geons, Black Holes, and Quantum Foam: A Life in Physics* (New York: W. W. Norton).

Chapter 13

We got to know his method

Ivan Mladenov

Acquaintance

Still trembling after my first international presentation as a young doctoral student, nearly 20 years ago in the Eastern Finnish town of Imatra, I was approached by the star of the event, Professor Thomas Sebeok. My expectations were that he is going to criticize my thesis, or to ask me tough questions, having in mind my unattributable accent in English. (It is still the same today, once the name “Bulgaria” is spoken of, a short exclamation follows: “ahh”, talk’s over). Instead, he said shortly: “I think you could work with me at the Research Center for Language and Semiotic Studies in Bloomington, Indiana for a couple of years”.

My presentation had been on the topic (God knows wherefrom taken) “Peirce’s unlimited semiosis and Bakhtin’s heteroglossia”. My speculation later of the reason for this invitation was my use of Peirce’s name. Then, in Imatra, I credited this invitation to some Western custom of politeness unfamiliar to me, and I didn’t undertake any efforts to follow through on what I thought was a courtesy invitation. What a surprise when, a year later, I got an official written invitation from Tom Sebeok to take part in the 1990 celebration of his 70th birthday in Budapest and Vienna.

I went to the event, read my paper, and was approached by Tom again, with a new question: “Why did you not accept my invitation?” At this time, Bulgaria was at the verge of democracy, but still in the Communist era and, frankly, I didn’t even know what procedures might have made it possible for me to follow up on his invitation to become a visiting scholar at his Indiana University Research Center for Language and Semiotic Studies (RCLSS). So I had quite forgotten about his invitation, having attributed it, as I suggested above, to a compassionate behavior toward an inexperienced young colleague. I “bravely” admitted this, and got the answer: “Simply, you apply for a Fulbright grant, I’ll write a letter of recommendation for you, and you’ll get it”. Well, it wasn’t that simple, because for the first year that Fulbright grants were publically announced in the Bulgarian media, there were over a thousand applications for just twelve places! But, thanks to Tom’s letter, I must suppose, I got the grant.

Once in the RCLSS in Bloomington, I was asked by Tom Sebeok what I exactly wanted to work on. Another “brave” answer from me: “Peirce”. Tom took me to the 6th floor of the famous library of the Indiana University. We approached the shelf with the full eight-volume edition of Peirce, and he said: “There you are”. What followed, I have described in the preface to my book (Mladenov 2006). During the entire first year of my reading of Peirce’s works, I understood the punctuation signs with great certainty – but not too much more. Still, the first lesson I learned in the front of that shelf was to have patience; for anyone who dares to become a student of Peirce needs it.

Biology and melancholy

Tom used to gather all international scholars hosted by the Research Center – there were four to six of us at any given time – for a brunch every Friday. The exact number depended on who was leaving and who arriving. At the Friday meetings we had spontaneous discussions and talks which Tom never used to reinforce his own views. He was friendly, accessible, and with great sense of humor. Most importantly, there was no distance between him, the world-famous scholar, and us, who were at the beginning stages of our careers.

I spent the two years 1991–1993, during which we were frequently visited by many colleagues who were either famous semioticians already – such as Umberto Eco, Eero Tarasti, Floyd Merrell – or made a name shortly after – like Lucia Santaella, Dinda Gorlee, Winfried Nöth, Fernando Andacht, Erika Fischer-Lichte, Niilo Kauppi from Finland (who stayed longest at the Center), Howard Smith from Canada, and many others. At that time, John Deely’s *Basics of Semiotics* had just been published, endorsed by Sebeok as “the only successful modern English introduction to semiotics”. I remember that he strongly recommended it to me, and it became in fact the first book I read at the RCLSS, thinking at that time that this was a part of the necessary work I have to do, along with my main work on Peirce.

Day by day, little by little, I acquired knowledge about the context and content of Peirce’s thought. Tom helped me to enter into a circle of Peircean scholars, introducing me as if I were one myself, which was extremely embarrassing. If I have to describe with just one word Tom’s attitude towards us, it would be “tolerance”. Recommendations might be made here and there, but not a single moral imperative about “what

we should investigate” was ever imposed upon us in the Center. We had different interests in many areas of semiotics, but we were always made to feel that Tom was taking special care for each one of us. There was an intensive and stimulating environment in the Center. Without being obliged to do any particular thing whatsoever, we attended classes, met people, listened to the occasional lectures given by Tom (he had just retired from active teaching) or by his invited guests, went to Friday’s meetings, talked and discussed topics, all of which often resulted in some good articles.

One particular speech given by Tom from that time is deeply stamped in my memory: “Pandora’s Box: How and Why to Communicate 10,000 Years into the Future”. He discussed a way of signifying the danger of nuclear waste sites into the very far future. It opened my mind for an unforeseen importance of semiotics. We had a long and unforgettable follow-up discussion, saturated with live details not mentioned in the speech. It had earlier been published as an article with the same title in Marshall Blonsky’s 1985 collection, *On Signs*.

I carefully studied Tom’s books, among them *The Play of Musement* (1982), where he elaborated on Peirce’s thought, especially on his abductive method (in fact, “musement” was one of the names Peirce gave to his method). I found it extremely helpful, with exactly what I needed – a variety of examples illustrating Peirce’s concepts. In this particular book Tom Sebeok developed one of his own contributions to semiotics, the identification of a new branch of semiotic study, *zoosemiotics* (a term he coined to name the study of the action of signs in the world of animals in 1963). This had to do with one of his chief educational background interests, biology. Here is how Tom characterizes himself in another of his books (1991: 9): “I define myself as a biologist manqué, as well as, concurrently, a ‘doctrinaire of signs’ malgré lui”.

But the book of Tom which I most admire is *A Sign Is Just a Sign* (1991), an unexpectedly nostalgic work with a light melodramatic atmosphere. When I told him about my preference, he invited me to his favorite “Uptown Café” in Bloomington where we had a memorable conversation about the movie *Casablanca*, which is a focal point in one part of the book. I realized that Tom values his Hungarian legacy. I learned from him that the two-thirds of the film’s crew were of Hungarian origin. He drew my attention to the surprising fact that the only people in the movie who really escaped the magic place, *Casablanca*, were ... the Bulgarian couple! (with the help of the main character, Rick). It is probably the

only melancholic book written by Tom, and, in my opinion, his best one. He considered it his “early memoir”.

Spinning the semiotic web

During my stay in Bloomington I had an intensive correspondence with the people from the then-newly-established New Bulgarian University (NBU) in Sofia, Bulgaria. Tom showed a lively interest in this project and asked me many questions about it. Finally he decided to visit Bulgaria, and the New Bulgarian University in particular. He flew to Bulgaria for the first time in 1992. He gave several lectures not only in the university, but in the biggest public building for meetings and conferences in Sofia, The National Palace of Culture. Tom Sebeok was granted the highest academic degree of the New Bulgarian University, thus becoming the first *Doctor Honoris Causa* of NBU. The New Bulgarian University, which is the first and most prestigious private university in Bulgaria, owes a lot to Tom Sebeok. Tom conveyed advice, know-how, concepts for development of semiotics, strongly encouraging the establishment of the Southeast European Center for Semiotic Studies within NBU. The semiotic program there is now known world-wide, especially through the annual Early Fall School of Semiotics (EFSS) sponsored by NBU, which began in 1995. The name of the EFSS was a happy brainchild of mine that came to me while I was thinking of the early start of the semesters in the US and the possibility of having some US colleagues participate regularly in the fall school. It fits well as an academic event supported by a new and lively university. The first invited guests of the EFSS were scholars I met in Bloomington, such as Jørgen Dines Johansen, for example.

Thomas Sebeok thus helped in the founding of semiotic teaching in Bulgaria, as he had earlier done for Finland, where he was instrumental in the launching of the popular Imatra summer school, working in a close cooperation with Eero Tarasti. Sebeok visited Mexico, Brazil, Argentina, Romania, Hungary, Estonia, all the time helping to set up the next semiotic community there. (His whole collection of books in zoosemiotics went to Tartu after his death in 2001). He was an extensive and passionate traveler, taking visiting appointments at 33 universities in 17 countries over the course of his career. Of course, the trip as such was not ever his purpose: he was never a “tourist”. Many years, later I realized that Tom Sebeok was following Charles Peirce’s vision for creating “communities of inquirers”, where the hypotheses would be challenged, proved, and

eventually merged over an indefinitely long period. A worthy task for which fulfillment Tom was circulating around the world spinning a “global semiotic net” of collaborators and sympathizers.

This is perhaps the place to mention Tom’s enormous achievement in launching the *Approaches to Semiotics* series with Mouton de Gruyter in Europe, starting in 1969, as well as later his *Advances in Semiotics* series in the United States with the Indiana University Press. The books from those series will be in use for a long time to come. One also has to call attention to the journal *Semiotica*, which Tom created and edited until his death. The journal continues up to today to win international success – for the publication of an article there one must count on a year to a year and a half wait, if not more. After Tom Sebeok resigned as series editor for the IU Press there was no one to prolong his series, but the same can be said for every field in which he was active at that university.

Another quality of Tom was that he had a flair for success even when it was in the embryonic stage in the scholars he used to invite to the center. All or nearly all of the colleagues who stayed there as researchers went on to have remarkable careers. It is probably enough to mention that the year spent in Bloomington (1984) boosted Umberto Eco’s semiotic development and polished his thought with some Peircean shine. Just one curious example: I was approached by the academic faculties from the Indiana University who asked me to stay longer and teach courses there. To my reply that I didn’t hold an American degree, they replied that I’d been invited by Professor Thomas Sebeok and that this was sufficient proof for them to treat and regard me as a distinguished scholar.

The gnosis and the bees

In my second year in Bloomington, a decisive turn occurred in my academic development. Studying Peirce was my priority task at the semiotic Research Center. At first, I gathered mainly contextual knowledge on his thought, without even daring to quote his name. (In fact, I did not quote Peirce for many years after I started to study his work). Why Peirce? It all began as a pure accident. Some years before visiting the US, I had read some of Peirce’s work. I became fascinated, and remained loyal to this first impression until now. I have heard similar solemn words by many Peircean devotees, from whom I learned valuable lessons on this magnificent philosophy. Then, again by chance (or, shall I say nothing is accidental?), I found myself in a once only post-doctoral course on Peirce given by

Nathan Houser. (Nathan became the third Director of the Peirce Edition Project at Indiana University, after Edward C. Moore, the founding Director, and Moore's successor, Christian Kloesel. Nathan has just retired from the post in 2009, succeeded by André DeTienne.) The clouds began to part. But there were many more years and much more work to be done before I began to feel more comfortable in the midst of the mist.

However, it was a time for me to leave the nest and try to win my own wings. I "discovered" Peirce's manuscripts in the Peirce Edition Project in Indianapolis, and started frequently to pay visits to Indy. I almost stopped attending Friday's brunches at the semiotic center for the sake of my intensive study of Peirce. Tom Sebeok's attitude towards me did not change in the slightest. From today's distance, I would say that he would have been right if he had. It was he who had invited me to the center, but he wouldn't be who he was had he stopped me from pursuing my scientific goals. I am forever grateful for that.

We would still meet, talk, and discuss topics of mutual interest. But we did this less frequently, and with less passion from my side if the problems were not concerning Peirce study. I had found my own topic, which remained my topic to this day. And I am enormously grateful to Tom that he did not ever rebuke me on my narrow focus. He himself was attracted by Peirce's thought, and this no doubt helped him to better understand me. After many years, I realized that Tom had dug in the same bed, but with much more power, trying to expand semiotic boundaries beyond the linguistic ones set by Ferdinand de Saussure (semiology), thus embracing the human nonverbal communication as well as communication in all living organisms and sign processes within organisms. Here is an example of how Tom's understanding of communication processes goes much farther than could one of Locke-Frege-Peirce tradition. Following rather the Locke-Peirce semiotic line, Tom gives us some fragrance of the future (Sebeok 1991: 9):

Comparably regulated semiotic hierarchies have been shown to govern sign processes (belonging to the domain called endosemiotics) involving communication between cells or cell complexes. These encompass, among others, the genetic code, the immune code, the metabolic code, the neural code.

However, I did not feel like a bee anymore gathering knowledge by flying among studious flowers. I am not sure whether this last sentence of mine may not have been induced by that passage of Tom's where he described himself as an academic *Apis mellifera*, who darts "solitary from

flower to flower, sipping nectar, gathering pollen from flowers, serendipitously fertilizing whatever he touches.” I am not referring to Peirce’s self-description as “a wasp in a bottle” either. For my personal situation I employed an extended metaphor by the Spanish philosopher Jose Ortega Y. Gasset, who wrote that from the center of a round room with windows, there is less to be viewed from within than if we approach a single window. I tried to both look from the center and then slowly to approach a large window with the name *Charles S. Peirce* carved on a brass plate on its sill.

Before my eyes, as in a Sesame cave, the treasures of thought revealed themselves and I rushed to grab them. I discovered Peirce’s “bottomless lake” of ideas, where each dip made its waters clearer. Peirce (CP 7.547) compares consciousness to a “bottomless lake, whose waters seem transparent, yet into which we can clearly see but a little way”. Ideas moving upward catch other ideas on their way to the “upper visible layer”, where they spread and then commence to sink downwards. This permanent flow of thought attracted me more than any other phenomenological system. I have been challenged by the extreme difficulty of this wonderful philosophy, but the matter of fact is that without a well-versed instructor, one will never get a piece of its gold. After the one year post-doctoral course from which I graduated with three others, I felt that I had obtained a mission to teach and spread Peirce’s thought around the world, which I have been doing ever since.

Some amazing puzzles¹

At the beginning of 1991 Tom Sebeok, in charge of the *Advances in Semiotics* series at IU Press, ran across the still after forty years unpublished doctoral dissertation of Joseph Brent on Peirce’s life and work. He immediately determined to publish Brent’s dissertation. I witnessed his great excitement and enthusiasm in implementing this objective. We stood in front of the Lilly Library at IU-Bloomington, when he told me how he had discovered the dissertation and its author. The impression this story made on me was increased by the kind of mysticism surrounding the neo-classical building of the Lilly Library. Most probably it was just my feeling, but I remember how long I could not find that library building the first time.

1. A word-game with the last essay of Charles Peirce (1909), “Some Amazing Mazes”.

As is now well-known in semiotic circles, Brent's book turned into a scientific best-seller. In its preface the reader can find narrated Tom Sebeok's almost detective efforts to search for the abandoned author, pursuing him to rewrite his work for publication at last. In Tom's book *The Play of Musement* there is a chapter entitled "You know my method: A juxtaposition of Charles S. Peirce and Sherlock Holmes". I guess Tom was in a real situation similar to the fictional situations of Sherlock Holmes while he was tracking down Joe Brent to have him modify and update his dissertation for book publication. Tom was fascinated by Peirce's abductive method, which Peirce used to call by another oxymoronic name: a method of (right) guessing. It really is such a method, in its proper use, and Tom was using it properly to find out the whereabouts of Brent and to persuade him to give his dissertation to the IU Press. I don't really know whether Tom was fatalist or not, but one can read in his foreword to Brent's book about the "curse" over Peirce's philosophy. Somehow, Peirce's failures seem to be inducted into everyone who follows his steps in philosophy! For Tom, Joe Brent might be seriously considered to qualify for incarnating Peirce's individuality.

Several years after this occurrence, I found myself in a strikingly similar situation; so similar that it was hard to believe it. I discovered a Bulgarian philosopher with the name Ivan Sarailiev (1887–1969), who published a book entitled *Pragmatism* as early as 1938. He quoted Peirce's *Collected Papers*, the first six volumes of which had just appeared between 1931 to 1935. More than that, I found that there was an even earlier quotation of Peirce by Ivan Sarailiev in an article published in the Bulgarian journal, *Outchilisten Pregled* (vol. 32, June 1933, pp. 725–36). The article, in Bulgarian, was called "Charles Sanders Peirce and his Principle", where, among other things, Sarailiev made sure that the readers knew how to pronounce Peirce's name properly. This was in the times when the volumes of the *Collected Papers* were not even yet completed. Sarailiev's "Pragmatism", with a photograph of the famous Ellen Emmet Rand portrait of William James for its frontispiece, is a remarkable book, an important record of Sarailiev's involvement with the European spread of pragmatism and of his extensive travels in France, England, Germany, and the United States. It also provides a vivid snapshot of pragmatism at this critical early period of Europe's late modern history.

Who was this philosopher, why there was not a single notice of his work in any dictionary or encyclopedia? I couldn't find a single fact about him in any bibliographical source. Like Tom, I tried to track down some surviving relatives of his, but, again as in Brent's case, all traces led

to a dead end. When I finally discovered the wife of Ivan Sarailiev's brother, it turned out that she was just about to throw away all his books and diaries, stacked in big boxes. On the next day! This resembled the case with Peirce's second wife, Juliette, who burned in her back yard the last pile of Peirce's manuscripts she had found in the house.

In 1944, however, Sarailiev's career had come to a sudden halt when the communists took power in Bulgaria. This brought an abrupt end to his extensive international travels, and immediately isolated him from the international scholarly community. In June of 1946, Sarailiev was elected president of the University of Sofia, but because of his unwillingness to cooperate with the communist authorities, he was compelled to resign within the year. He was banned from further publishing and his previous publications were blacklisted. Even his name was classified. Sarailiev died peacefully, but in total obscurity, in Sofia in 1969. There are few reliable documentary sources on his life, and it is still difficult to obtain any of his books, articles, or papers. Sarailiev was all but erased from history. That was the reason I could not find any traces of him. Had he written in a more popular language, Sarailiev might well have gained a world-wide recognition.² Even so, with his work, the beginning of late modern Bulgarian philosophical thought, pragmatism in particular, and semiotics, can be traced back to the turn of 20th century.

I managed to show this book *Pragmatism*, to Tom in 1999, and to enjoy his reaction, which was astonishing. He asked me to immediately write an article on Ivan Sarailiev and to send it to the Peirce Edition Project, which I did (Mladenov 2000). They too were amazed by the discovery of this philosopher. Thus the beginning of semiotic thought in Bulgaria can be moved back as early as the first publications of Ivan Sarailiev, before Jakobson, before even Charles Morris.

2. Sarailiev was the first pragmatist in Eastern Europe, it is true; yet paradoxically, it is rather more astonishing to call him "a very early pragmatist". He became such in 1909, when, after his graduation from the Sorbonne (where he studied with Henry Bergson), he spent a year at Oxford studying in close cooperation with Ferdinand C. S. Schiller, from whom Sarailiev learned the method of pragmatism. Apart from Schiller, only in Italy at that time there was some mentioning of the name of pragmatism. The first Italian pragmatists, Pappini, Prezzolini Vailatti, etc., held their pragmatic discussions as early as at the turn of the century, and had their own journal even, *Leonardo*, founded in 1903, not to mention (as reported in De Waal 2004) that William James met with them in Rome in 1905.

With the decisive support of the President of the NBU, Professor Bogdanov, all boxes with Sarailiev's books and diaries, prepared to be thrown away, were donated to the university. Nowadays, one of the biggest auditoriums at the NBU is named "Ivan Sarailiev", his archives are kept in a special department, and a small centre for studying his thought has been established. His books are going to be re-published, and some of them translated into English. The Communist verdict of oblivion was cancelled, the revival begun.³

His method – dynamic and energy

So, we learned Tom's method to create, help, and encourage semiotic studies around the world. As in Origen's vivid metaphor (in Lossky 1983: 56), we were "pushed to the front of the doors of Jerusalem, which separated the sanctuary from the outer courtyard". We got to know that these are the doors of knowledge. But we had to climb its degrees of perfection in silence and solitude. Ever since we walked away, we feel Tom's "dynamic" and "energy" as they were once defined by Aristotle, like potentiality and embodiment, of his spirit.

* * *

I cannot stand describing the way John Deely, a true Incarnate of Tom Sebeok's personality and talents, invited me to contribute this small article to the volume devoted to Tom. John's request found me at the University of the German City of Bremen, in the middle of over-intensive academic activities and running out deadlines. Here is what he wrote: "It will be personal and will come easily. Just do it when you need a break from work; you'll see that Tom's spirit will make it happen if you give it a chance". Thank you, Tom, thank you, John.

References

- Aristotle
 c.330b BC *On the Soul*, trans. J. A. Smith; ed. W. D. Ross (Oxford).
 Blonsky, Marshall, Editor
 1985 *On Signs* (Baltimore, MD: The Johns Hopkins University Press).

3. A complete bibliography of Sarailiev's writings can be found in Mladenov 2006a.

- De Waal, Cornelis
2004 *On Pragmatism* (Beverly, MA: Wadsworth Publishing Company).
- Lossky, Vladimir
1983 *The Vision of God* (Crestwood, NY: St. Vladimir's Seminary Press).
- Mladenov, Ivan
2000 "Ivan Sarailiev – An Early Bulgarian Contributor to Pragmatism", *Peirce Edition Project Newsletter* 3.2 (Fall; Indiana University/Purdue University, Indianapolis).
- Mladenov, Ivan
2006 *Conceptualizing Metaphors. On Charles Peirce's Marginalia* (London: Routledge).
- Mladenov, Ivan
2006a "Ivan Sarailiev – an early Bulgarian contributor to pragmatism", Appendix to Mladenov 2006: 174–177.
- Peirce, Charles Sanders (10 September 1839–1914 April 19)
1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction "Membra Fictae Disjecta – A Disordered Array of Severed Parts" (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Sarailiev, Ivan
1938 *Pragmatizmat* (Sofia, Bulgaria: Pridvorna pechatnica; reprinted in 2002 by the Nov Bulgarski Universitet).
- Sebeok, Thomas A.
1982 *The Play of Musement* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
1985 "Pandora's Box: How and Why to Communicate 10,000 Years into the Future", in Blonsky Ed. 1985: 448–466.
- Sebeok, Thomas A.
1991 *A Sign Is Just a Sign* (Bloomington, IN: Indiana University Press).

Chapter 14

About a master of signs starting from *The Sign & Its Masters*

Susan Petrilli

I remember...

When I first discovered Thomas A. Sebeok he was already internationally renowned for his contribution to semiotics, and above all for having promoted research, editorial projects, encounters, seminars, and conferences relatively to semiotics worldwide. He was editor of several important collective volumes, and had acted as Editor-in-chief of *Semiotica*, the journal of the International Association for Semiotic Studies, since it was founded in 1969. Sebeok was committed to promoting people and their research and communicating his discoveries to the interested public, often acting as a talent scout as he brought to light the work of scholars whose relevancy to semiotic studies was unknown (as in the case of Jakob von Uexküll), or drew attention to young researchers whose work and curiosities he appreciated and encouraged. Based at the Research Center for Language and Semiotic Studies at the Bloomington campus of Indiana University in the United States, with which he had been associated since 1946 before becoming its Director in the 1970s, he continued all these activities and much more without interruption until his untimely death in 2001.

At the time of first contacting Sebeok, I was familiar with two of his volumes: *Writings on the General Theory of Signs* (a collection of writings by Charles Morris, presented by Sebeok and published in 1971), and the collection *Perspectives in Zoosemiotics* (1972). I became aware of these volumes thanks to Ferruccio Rossi-Landi, whose monograph, *Linguistics and Economics* (1975), Sebeok had promoted for publication with Mouton de Gruyter. Two monographs by Sebeok on semiotics, translated by Massimo Pesaresi, were already available in Italian: *Contributions to the Doctrine of Signs* (1976), and *The Play of Musement* (1981). When I contacted Sebeok on advice from Augusto Ponzio, it was to propose the Italian edition of his book, *The Sign & Its Masters* (1979), which I was keen to translate myself. After this enterprise, I subsequently translated many of Sebeok's works in semiotics published between 1986

(beginning with *I Think I Am a Verb*) and 2001, as he undisputably asserted himself as the greatest master of signs in semiotics of the twentieth century. I am now translating the last book he published before his death, *Global Semiotics* (2001).

My first telephone conversation with Sebeok was from Bari, in 1983, while he was in Milan. The reason I searched for him was to inform him of my wish to translate his book on *The Sign & its Masters* into Italian for publication in a book series directed by Augusto Ponzio and Maria Solimini, entitled “Segni di segni”.

Sebeok himself recounts our first telephone conversation in his Preface – dated Bloomington May 18, 1988 – to my first monograph *Significs, semiotica, significazione* (1988: 15–18). He had just arrived “at Malpensa in the early hours of a spring morning after a tiring transoceanic flight”, and on his arrival “at his favorite hotel in Milan”, he heard his telephone ringing with insistence as the hotel boy made way for him toward his room.

A lady in perfect English, even if with a “colonial” accent, informed me that she was calling from the University of Bari on behalf of Professor Augusto Ponzio. . . . I then learnt that the lady whom I had exchanged for an English woman had in reality passed from one point to the other of the globe, that is, from Adelaide to Bari. Susan Petrilli, this was the name of my interlocutor, was born in Australia of Italian parents and had established herself in Puglia. . . . In brief, she seemed equipped to translate my book and eventually, I thought to myself, a second one as well (as effectively occurred with Sellerio publishers in Palermo). . . . Subsequently I also commissioned her the translation of a book by Giorgio Fano on *Origini e natura del linguaggio*.

He goes on to recount how we met for the first time in Alcabideche in Portugal:

I didn’t actually meet Susan Petrilli until 18 September 1983 when I first encountered her at a reception at Hotel Sintra-Estoril in Alcabideche in Portugal. I had been invited there to participate at an Advanced Study Institute, organized by Nato, on “Semiotics and International Scholarship”, which took place in that enchanting Portuguese meeting-place. For the occasion I delivered a series of lessons on semiotic anomalies, referred, that is, to empirical observations of “facts” that could not be explained from any existing theoretical perspective. All my arguments had been drawn from fairly popular fields of everyday semiosis, such as magic practiced as a profession, particularly telepathic communication, a vulgar form of deception,

conjuring tricks, illusionistic games, so-called parapsychic phenomena, and other divinatory practices of this type. Ms. Petrilli followed the whole session, so we had ample opportunity to get to know each other, as we discussed problems concerning her work in progress on the translation of my book, and even more importantly problems connected with the themes of her research.

Sebeok's narration of this initial phase of our relationship concludes as follows:

... given that Susan Petrilli and I both share an appreciation of Robert Graves's love poetry ... she had discovered that his lyrical works offer an ideal terrain for excursions into the analysis of poetry, it is fitting that I should conclude my Preface with a citation from "The Boy out of Church" [Graves 1920]. Whomever already knows this poem will note that I have only modified seven letters in a sole word:

I do not love the Sabbath
The soapsuds and the starch
The troops of solemn people
Who to Semiotics march.

Nihil signi mihi alienum puto

Sebeok began his higher education studies during the second half of the thirties at Cambridge. As a young college student the monograph authored by Charles K. Ogden and Ivor A. Richards, *The Meaning of Meaning* (1923), caught his attention – long before it became a classic in semiotics. Subsequently, he could also boast of benefiting from direct contact with two great masters of the sign who in different ways had also acted as his teachers: Charles Morris and Roman Jakobson (see the sections dedicated to these figures in Sebeok 1979, 1986, and 1991b). Another master of the sign for Sebeok (however indirect), who oriented his research decisively, was Charles Sanders Peirce.

While the expression *aliquid stat pro aliquo*, "something that stands for something else", describes the sign relation in dyadic terms,¹ Peirce's

1. See the critique of this formula and argument for its replacement with *aliquid stat alicui pro alio* as the proper and triadic "classical formulation" in Deely 2004: 30–31.

definition evidences the irreducibly triadic structure of the sign relationship. As such it places the condition for theorizing the movement of *renvoi*, transferral/deferral, structural to semiosis. This particular aspect of Peirce's analysis of sign structures and relations is highlighted by Thomas Sebeok when he says (1979: 8):

Peirce's definition embodies the core concept of *renvoi*, or transfer, Jakobson's compressed coinage (*Coup d'œil sur le développement de la sémiotique* [1975]) for the celebrated antique formulation, *aliquid stat pro aliquo*, but it contains one very important further feature. Peirce asserts not only that x is a sign of y , but that "somebody" – what he called "a *Quasi-interpreter*" (4.551) – takes x to be a sign of y .

Not only is a sign a sign of something else, but there is also a "somebody", a "*Quasi-interpreter*" (CP 4.551) that assumes something as a sign of something else. Peirce further analyzes the implications of this description when he says: "It is of the nature of a sign, and in particular of a sign which is rendered significant by a character which lies in the fact that it will be interpreted as a sign. Of course, nothing is a sign unless it is interpreted as a sign" (CP 2.308). And again: "A sign is only a sign *in actu* by virtue of its receiving an interpretation, that is, by virtue of its determining another sign of the same object" (CP 5.569).

As an irreducibly triadic structure, the sign cannot be reduced to a question of "representation" as use of this term for the relation between sign and object may, on the contrary, lead one to believe. In his famous definition reported in CP 2.228, Peirce does not specify the kind of relationship binding the sign to the object – which all the same is not limited to the logic of representation, of "standing for" something. At the same time, however, specification of the type of relationship between sign and object and between sign and interpretant is determinant in his classification of signs. Two significant examples are his trichotomies: icon, index, symbol; and rheme, dicisign, argument (cf. CP 2.243).

An important contribution to the development of Peircean semiotics comes from Charles Morris and, in fact, we may speak of a "Peircean-Morrisian sign model". Two considerable aspects in Morris's semiotics include: 1) the attribution of semiosis to living organisms – this aspect is subsequently developed by Sebeok and his biosemiotics; and 2) the focus on the relation of signs and values which Morris explicitly theorizes in his book of 1964, *Signification and Significance*. By contrast with an approach that reduces semiotics to anthroposemiotics (conceiving the latter as a cognitive, descriptive and ideologically neutral science), the most promis-

ing trends in semiotics today are those which practice a global approach to the life of signs and to the signs of life – semiosis and life coincide, says Sebeok – and that work at recovering the axiological dimension of semiosis. We have proposed the term “semioethics” (cf. Ponzio and Petrilli 2003) for an approach to the study of semiosis that focuses on the relation of signs to values, and that from Sebeok’s global semiotic perspective is critical of separatism and false or illusory totalities.

Despite such a totalizing approach to semiotics it is noteworthy that Sebeok neither used the ennobling term “science” nor the term “theory” to name it. Instead, he repeatedly favored the expression “doctrine of signs”, adapted from Locke who asserted that a doctrine is a body of principles and opinions that vaguely form a field of knowledge. Sebeok also used this expression as understood by Peirce (that is, with reference to instances of Kantian critique). This is to say that Sebeok invested semiotics not only with the task of observing and describing phenomena, in this case signs, but also of interrogating the conditions of possibility that characterize and specify signs for what they are, as emerges from observation (necessarily limited and partial), and for what they must be (cf. his Preface to Sebeok 1976).

This humble and at once ambitious character of the “doctrine of signs” led Sebeok to a critical interrogation *à la* Kant of its very conditions of possibility: the doctrine of signs is the science of signs that questions itself, attempts to answer for itself, and inquires into its very own foundations. As a doctrine of signs, semiotics also presents itself as an exercise in philosophy not because it deludes itself into believing that it can substitute philosophy, but simply because it *does not* delude itself into believing that the study of signs is possible without keeping account of philosophical questions that regard its conditions of possibility.

Sebeok has extended the boundaries of traditional sign studies, providing an approach to “semiotics” that is far more comprehensive than that developed by “semiology”. The limit of “semiology”, the science of signs as projected by Ferdinand de Saussure, consists in the fact that it is based on the verbal paradigm and is vitiated by the *pars pro toto* fallacy – in other words, it mistakes the part (that is, human signs and in particular verbal signs) for the whole (that is, all possible signs, human and non-human). On the basis of such a mystification, semiology incorrectly claims to be the general science of signs. When, instead, the general science of signs chooses the term “semiotics” for itself, it takes its distances from semiology and its errors. Sebeok dubs the semiological tradition in the study of signs the “minor tradition”, while, on the contrary, the tradition

he promotes as represented by John Locke and Charles S. Peirce, as well as by the ancients, Hippocrates and Galen and their early studies on signs and symptoms, he dubs the “major tradition”. In 1986 an entire anthology was published (Deely, Williams, and Kruse 1986) based on Sebeok’s identification of the *pars pro toto* fallacy and his contrast of the major tradition of semiotics to semiology as a comparatively minor tradition.

Through his numerous publications, Sebeok propounded a wide-ranging vision of semiotics that converges with the study of the evolution of life. After Sebeok’s work (which is largely inspired by Peirce, Morris and Jakobson), both our conception of the semiotic field and the history of semiotics have unquestionably changed. Thanks to him semiotics at the beginning of the new millennium has developed broad horizons – far broader than envisaged by sign studies during the first half of the 1960s.

On the extension and depth of Sebeok’s semiotic research and the problems he dealt with, Claude Lévi-Strauss commented as follows (Lévi-Strauss, “Avant-Propos”, in Bouissac, Herzfeld, Posner, eds., 1986: 3):

A lire les ouvrages de Sebeok, on est confondu par sa familiarité avec les langues et les cultures du monde, par l’aisance avec laquelle il se meut à travers les travaux des psychologues, des spécialistes de neuro-physiologie cérébrale, de biologie cellulaire, ou ceux des éthologues portant sur des centaines d’espèces zoologiques allant des organismes unicellulaires aux mammifères supérieurs, en passant par les insectes, les poissons et les oiseaux. Ce savoir plus qu’encyclopédique se mesure aussi aux milliers de noms d’auteurs, de langues, de peuples et d’espèces composant les index des ouvrages écrits ou dirigés par lui, et à leurs énormes bibliographies.

Sebeok opens *The Sign & Its Masters* describing this book of 1979 as “transitional”. In truth, this is a remark that may be extended to all his research if considered in the light of recent developments in philosophical-linguistic and semiotic debate, keeping account therefore of the transition from “code semiotics,” which is centred on linguistics and consequently verbal signs, to “interpretation semiotics,” which unlike the former also accounts for the autonomy and arbitrariness of nonverbal signs, whether “cultural” or “natural”.

In his survey of the problems relevant to semiotics and the masters of the sign, Sebeok discusses various aspects characterizing these two different modalities of practising semiotics, which may be very simply summarized under two names – de Saussure and Peirce. The study of signs is “in transit” from “code semiotics” to “interpretation semiotics” as represented by

these two emblematic figures, and in fact has now taken a decisive turn in the direction of the latter.

Sebeok's critique of anthropocentrism and glottocentrism orients the general direction of his semiotic discourse and may be extended to all those approaches to semiotics that look towards linguistics for their sign model. For that which concerns Sebeok, his interest in cultural processes at the intersection between nature and culture led to his rediscovery of such scholars as the biologist Jakob von Uexküll whom he christened a "cryptosemiotician", one of those he studied most among others also identified as practitioners of semiotics even without knowing it.

To free oneself from the anthropocentric perspective as it has characterized semiotics generally implies to take into account other sign systems beyond those specific to mankind. These sign systems are not alien to the human world, however they do not specify it. They concern the encounter between human communication and the communicative behavior of non-human communities within the species and with the environment, as well as the sphere of endosemiotics, the study of sign systems inside the body on both an ontogenetic and phylogenetic level.

Sebeok succeeds in avoiding all forms of biologism which, instead, characterizes all those approaches that reduce human culture to communication systems traceable in other species. In the same way, he avoids the opposite fallacy of anthropomorphism, that is, of reducing nonhuman animal communication to traits and models that characteristically specify human beings.

A fundamental point in Sebeok's doctrine of signs is that living converges with sign activity, therefore to maintain and to reproduce life, and not only to interpret it in scientific terms, are all activities that necessarily involve the use of signs. Sebeok theorizes a direct connection between the biological and the semiotic universes, therefore between biology and semiotics. His research is a development on Peirce's conviction that man is a sign with the addition that this sign is a verb: to interpret. And in Sebeok's particular conception of reality, the interpreting activity coincides with the activity of life – in his own case with his whole of his life. If I am a sign, he seems to say through his life as a researcher, then nothing that is a sign is alien to me – *nihil signi mihi alienum puto*; and if the sign situated in the interminable chain of signs is necessarily an interpretant, then "to interpret" is the verb that best helps me understand who am I.

References

- Bouissac, Paul, Michael Herzfeld, and Roland Posner
 1986 *Iconicity. Essays on Nature and Culture. Festschrift for Thomas A. Sebeok on e his 65th birthday.* (Tübingen: Stauffenburg).
- Danesi, Marcel, Susan Petrilli, and Augusto Ponzio
 2004 *Semiotica globale. Il corpo nel segno* (Bari: Graphis).
- Deely, John
 1989 "A Global Enterprise", Introduction to corrected reprint of Sebeok 1979, pp. vii–xiv.
- Deely, John
 2004 "A Sign Is *What?*", *The American Journal of Semiotics* 20.1–4, 1–66.
- Deely John, and Susan Petrilli, Editors
 1993 *Semiotics in the United States and Beyond: Problems, People, and Perspectives*, Special Issue of *Semiotica* 97–3/4.
- Deely, John N., Brooke Williams, and Felicia E. Kruse, Editors
 1986 "Pars pro Toto", Preface to *Frontiers in Semiotics* (Bloomington: Indiana University Press), pp. viii–xvii.
- Fano, Giorgio
 1972 *Origini e natura del linguaggio* (Turin: Einaudi); English trans. with an Introduction by Susan Petrilli, *The Origins and Nature of Language* (Bloomington: Indiana University Press, 1992).
- Graves, Robert von Ranke
 1920 "The Boy out of Church", poem 5 of 46 in *Country Sentiment* (New York: Alfred A. Knopf).
- Jakobson, Roman
 1975 *Coup d'œil sur le développement de la sémiotique* (=Studies in Semiotics 3; The Hague: Mouton).
- Lévi-Strauss
 1986 "Avant-Propos" to *Iconicity: Essays on the Nature of Culture*, Festschrift volume in honor of Thomas A Sebeok, edited by Paul Bouissac, Michael Herzfeld, and Roland Posner (Tübingen: Stauffenburg Verlag).
- Morris, Charles W.
 1971 *Writings on the General Theory of Signs*, ed. T.A. Sebeok (The Hague: Mouton).
- Morris, Charles W.
 1964 *Signification and Significance. A Study of the Relation of Signs and Values* (Cambridge, MA: MIT Press).
- Morris, Charles W.
 1988 *Segni e valori. Significazione e significatività e altri scritti di semiotica, etica e estetica* (Bari: Adriatica), Italian trans. with Introduction by Susan Petrilli.

- Morris, Charles W.
2000 *Significazione e significatività* (Bari: Graphis), Italian trans. with Introduction by Susan Petrilli of Morris 1964.
- Ogden, Charles K. and Ivor A. Richards
1923 *The Meaning of Meaning. A Study of the Influence of Language upon Thought and of the Science of Symbolism*, with supplementary essays by B. Malinowski and F. G. Crookshank (London: Routledge and Kegan Paul; New York: Harcourt Brace Jovanovich, 1989).
- Peirce, Charles Sanders
i.1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Fictae Disjecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Petrilli, Susan
1987 Introduction to Petrilli Ed. 1987: 7–9.
- Petrilli, Susan
1988 *Significs, semiotica, significazione* (Bari, Adriatica), with a Preface by Sebeok 1988: 15–18.
- Petrilli, Susan
1991 “From Peirce (via Morris and Jakobson) to Sebeok: Interview with Thomas A. Sebeok” in T. A. Sebeok 1991c: 95–105.
- Petrilli, Susan
1992a Introduction to “The Correspondence Between Morris and Rossi-Landi”, Special Issue of *Semiotica* 88.1/2, pp. 1–32.
- Petrilli, Susan
1992b “Iconicity at the Origin of Language: C.S. Peirce and G. Fano”, Introduction to Fano 1972: xvii–xxvii.
- Petrilli, Susan
1993 “Thomas A. Sebeok and Semiotics in the United States in the Panorama of Recent Developments in Italian semiotics”, in Deely and Petrilli eds. 1993: 337–372.
- Petrilli, Susan
1994 “Signs and Values in Linguistic Work”, in *Reading su Ferruccio Rossi-Landi. Semiosi come pratica sociale*, ed. Jeff Bernard et al. (Naples: Edizioni Scientifiche Italiane), 135–159.
- Petrilli, Susan
1995 “La Iconicidad en la ‘Doctrina de los signos’ de Thomas A. Sebeok,” *Cruzeiro Semiotica*, Sept., pp. 303–313.

- Petrilli, Susan
2001a "Comments on Some Books by Sebeok," in M. Danesi (ed.), *The Invention of Global Semiotics. A Collection of Essays on the Life and Work of Thomas A. Sebeok* (Ottawa, Canada: Legas), 103–113.
- Petrilli, Susan
2001b "Anche a Bari 'l'impollinazione semiotica' del maestro Thomas Sebeok. Una vita per i segni della vita", *Bari Sera*, 27/28 (December), p. 25.
- Petrilli, Susan
2001c "A Life for the Signs of Life: 'Semiotic Impollination' through the Global Semiosphere by the Master of Signs, Thomas A. Sebeok," *The American Journal of Semiotics. The Body as Sign and Embodiment. Thomas Albert Sebeok. In Memoriam* 17. 4 (Winter 2001; printed October 2003), 319–321.
- Petrilli, Susan
2003 "Sebeok's Semiotic Universe and Global Semiotics", *Cybernetics & Human Knowing. A Journal of Second-order Cybernetics, Autopoiesis and Cyber-Semiotics. Thomas Sebeok and the Bio-semiotic Legacy*, 10.1: 61–79.
- Petrilli, Susan
2004a "Thomas A. Sebeok and Global Semiotics", in *Annali della Facoltà di Lingue e Letterature Straniere*, Terza serie / 2004–2005 / XVII, pp. 69–90.
- Petrilli, Susan
2004b "Human Responsibility in the Universe of 'Global Semiotics'," *Identity and Locality in the World of Global Communication*, Special Issue ed. by Eero Tarasti of *Semiotica* 150–1/4, pp. 23–38.
- Petrilli, Susan, Editor
1987 "Per Ferruccio Rossi-Landi", *Il Protagora* Special Issue XXVII.11/12.
- Petrilli, Susan, Translator
1985 See Sebeok 1985.
- Petrilli, Susan, Translator
1990 See Sebeok 1990.
- Petrilli, Susan, Translator
1992 See Sebeok 1992.
- Petrilli, Susan, Translator
1994b See Sebeok 1994b, 1998a.
- Petrilli, Susan, Translator
1998a See Sebeok 1998a.
- Petrilli, Susan, Translator
1998b See Sebeok 1998b.

- Petrilli, Susan, Translator
2004 See Sebeok 2004.
- Petrilli, Susan, and Augusto Ponzio
2001 *Sebeok and the Signs of Life* (London: Icon Books).
- Petrilli, Susan, and Augusto Ponzio
2002a *I segni e la vita. La semiotica globale di Thomas A. Sebeok* (Milan: Spirali).
- Petrilli, Susan, and Augusto Ponzio
2002b “Modeling, Communication, and Dialogism in Bio- and Socio-semiosis”, in Ponzio ed. 2002: 267–307.
- Petrilli, Susan, and Augusto Ponzio
2003 *Semioetica* (Rome: Meltemi).
- Ponzio, Augusto, Editor
2002 *Quaderni del Dipartimento di Pratiche Linguistiche e Analisi di Testi, PLAT* (Bari: Edizioni dal Sud).
- Rossi-Landi, Ferruccio
1975 *Linguistics and Economics* (The Hague: Mouton).
- Saussure, Ferdinand de
i.1906–1911 *Cours de linguistique générale*, lectures delivered at the University of Geneva and posthumously published from auditors’ notes by Charles Bally and Albert Sechehaye with the collaboration of Albert Riedlinger (Paris: Payot, 1916).
- Sebeok, Thomas A.
1976 *Contributions to the Doctrine of Signs* (Bloomington, IN, and Lisse, Netherlands: Publication of the Research Center for Language and Semiotic Studies of Indiana University, together with The Peter De Ridder Press). Reprinted with an extended Prefatory Essay by Brooke Williams, “Challenging Signs at the Crossroads”, evaluating the book in light of major reviews (=Sources in Semiotics IV; Lanham, MD: University Press of America, 1985).
- Sebeok, Thomas A.
1979 *The Sign & Its Masters* (Texas: The University of Texas Press). See also 1989 entry following.
- Sebeok, Thomas A.
1979a *Contributi alla dottrina dei segni* (Milano: Feltrinelli), Italian trans. by M. Pesaresi of Sebeok 1976.
- Sebeok, Thomas A.
1981 *The Play of Musement* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
1984 *Il gioco del fantasticare* (Milan: Spirali, 1984), Italian trans. by M. Pesaresi of Sebeok 1981.
- Sebeok, Thomas A.
1985 *Il segno e i suoi maestri* (Bari: Adriatica), Italian trans. with an Introduction by Susan Petrilli of Sebeok 1979.

- Sebeok, Thomas A.
 1986 *I Think I Am a Verb* (New York and London: Plenum Press).
- Sebeok, Thomas A.
 1987 “Messaggi al mercato”, in Petrilli Ed. 1987: 59–68.
- Sebeok, Thomas A.
 1988 “Preface”, dated 18 May, to Petrilli 1988: 15–18.
- Sebeok, Thomas A.
 1990 *Penso di essere un verbo* (Palermo: Sellerio), Italian trans. with an Introduction by S. Petrilli of Sebeok 1986.
- Sebeok, Thomas A.
 1989 *The Sign & Its Masters* (=Sources in Semiotics VIII; Lanham, MD: University Press of America). Corrected reprint of the University of Texas Press 1979 original imprint with a new author’s Preface and an Introduction by John Deely, “A Global Enterprise”, pp. vii–xiv.
- Sebeok, Thomas A.
 1991a *A Sign Is Just a Sign* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
 1991b *Semiotics in the United States*, Bloomington, Indiana University Press.
- Sebeok, Thomas A.
 1991c *American Signatures. Semiotic Inquiry and Method* (Norman, OK: University of Oklahoma Press), ed. with and Introduction by Iris Smith.
- Sebeok, Thomas A.
 1992 *Sguardo sulla semiotica americana* (Milano: Bompiani), Italian trans. with an Introduction by S. Petrilli of Sebeok 1991b.
- Sebeok, Thomas A.
 1994a *Signs. An Introduction to Semiotics* (Toronto: University of Toronto Press; reprinted 2001).
- Sebeok, Thomas A.
 1994b “Global Semiotics”, in *Semiotics Around the World: Synthesis in Diversity*, ed. I. Rauch and G. F. Carr (Berlin: Mouton de Gruyter; reprinted in Sebeok 2001, and in Italian trans. “La semiotica globale” by S. Petrilli in 1998a).
- Sebeok, Thomas A.
 1998a *A Sign is just a sign. La semiotica globale* (Milan: Spirali), Italian trans. with an Introduction by S. Petrilli of Sebeok 1991a combined with 1994b.
- Sebeok, Thomas A.
 1998b *Come comunicano gli animali che non parlano* (Bari: Edizioni dal Sud), Italian trans. ed. and introduced by S. Petrilli.
- Sebeok, Thomas A.
 2001 *Global Semiotics* (Bloomington, IN: Indiana University Press).

- Sebeok, Thomas A.
2004 *Segni. Introduzione alla semiotica* (Rome: Carocci), Italian trans. and Introduction by S. Petrilli of Sebeok 1994.
- Sebeok, Thomas A., Editor
1972 *Perspectives in Zoosemiotics* (The Hague: Mouton).
- Sebeok, Thomas A., Editor
1971 See Morris 1971.
- Sebeok, Thomas A., and Susan Petrilli
1998 "Women in Semiotics", in *Interdigitations: Essays for Irmengard Rauch*, ed. G. F. Carr *et alii* (Bristol, England: Thoemmes); reprinted in Sebeok 2001.
- Sebeok, Thomas A., Susan Petrilli, and Augusto Ponzio
2001 *Semiotica dell'io* (Rome: Meltemi).

Chapter 15

A Tribute to Thomas A. Sebeok

Susan Petrilli and Augusto Ponzio

Semiotics today owes its configuration as “global semiotics” to Thomas A. Sebeok (1921–2001). By virtue of his “global” or “holistic” approach, Sebeok’s research into the “life of signs” can immediately be associated with his concern for the “signs of life”. From Sebeok’s point of view, *semiosis* and *life* converge. Regardless of whether semiosis originates with the first stirrings of life or not (Petrilli 2008: 6–7), semiosis is certainly a “critical attribute of life” – an axiom Sebeok believed cardinal to semiotics. Thus semiotics provides a point of convergence and observation post for studies on the life of signs and the signs of life.

Sebeok’s global approach to sign life presupposes his critique of anthropocentric and glottocentric semiotic theory and practice. In his explorations of the boundaries and margins of the science or (as he also calls it) the “doctrine” of signs, he opens the field to include *zoosemiotics* (a term he introduced in 1963) or even more broadly *biosemiotics*, on the one hand, and *endosemiotics*, on the other (see Sebeok, “Biosemiotics. Its roots, proliferations, and prospects”, in Sebeok 2001a). In Sebeok’s conception, the sign science is not only the “science qui étudie la vie des signes au sein de la vie sociale” (Saussure), that is, the study of communication in culture, but also the study of communicative behavior throughout the living world – what he called a biosemiotic perspective.

1. Biosemiotics and modeling systems theory

Thomas A. Sebeok may be counted among the figures who have most contributed to the institutionalization of semiotics internationally, and to its configuration as “biosemiotics”, “semiotics of life”, or, as he preferred in his latest book (2001a), “global semiotics”. His work has largely been inspired by Charles S. Peirce as well as by Charles Morris and Roman Jakobson.

Thomas A. Sebeok was born in Budapest, 9 November 1920, and died in Bloomington, 21 December 2001. He migrated to the United States in 1937, and became a US citizen in 1944. He had been a faculty member of

Indiana University since 1944, and Editor-in-chief of the journal *Semiotica* since it was founded with the International Association for Semiotic Studies in Paris in 1969.

Sebeok began his studies in higher education during the second half of the thirties at Cambridge, in the United Kingdom. He was particularly influenced by *The Meaning of Meaning* (1923), by Charles K. Ogden and Ivor A. Richards, long before it became a classic in semiotics. Also, he can boast of having benefited from direct contacts with two great masters of the sign who, in different ways, and under different aspects had also been his teachers: Charles Morris and Roman Jakobson. His numerous and diversified research interests cover a broad expanse of territories, ranging from the natural sciences to the human sciences.

After Thomas A. Sebeok, semiotics is emerging as “global semiotics”. According to the global semiotic perspective, signs and life coincide, and semiosis is behavior among living beings. As Lévi-Strauss remarked (1986: 3):

On reading Sebeok’s works one is astonished by his familiarity with the languages and cultures of the world, by the ease with which he moves across works by psychologists, specialists in brain neuro-physiology, in cell biology, or by ethologists on hundreds of zoological species, from unicellular organisms to superior mammals, passing through insects, fish and birds. This more than encyclopaedic knowledge can also be measured in terms of the thousands of names of authors, languages, peoples and species cited by Sebeok in the indexes of his books, whether written or edited by himself, and in their enormous bibliographies.

Given that it signifies, the entire universe enters Sebeok’s “Global Semiotics” (cf. Sebeok 2001a). Semiotics is the place where the “life sciences” and the “sign sciences” converge. This means that *signs* and *life* converge precisely in the interactions of living things. Therefore, it follows that the human being is a sign in a universe of signs.

Sebeok has extended the boundaries of traditional sign study, providing an approach to “semiotics” that is far more comprehensive than that developed by “semiology”. The limit of “semiology”, the science of signs as projected by Ferdinand de Saussure, consists in the fact that it is based on the verbal paradigm and is vitiated by the *pars pro toto* error – in other words, it mistakes the part (that is, human signs and in particular verbal signs) for the whole (that is, all possible signs, human and non-human). On the basis of such a mystification, semiology incorrectly claims to be the general science of signs. When instead the general science of

signs chooses the term “semiotics” for itself, it takes its distances from semiology and its errors. Sebeok dubs the semiological tradition in the study of signs the “minor tradition”. Instead, the tradition represented by John Locke and Charles S. Peirce, as well as by the ancients, Hippocrates and Galen and their early studies on signs and symptoms, he dubs the “major tradition” and is the tradition he promotes.

Through his numerous publications Sebeok has propounded a wide-ranging vision of semiotics that converges with the study of the evolution of life. After Sebeok, both the conception of the semiotic field and the history of semiotics have radically changed. Thanks to him, semiotics at the beginning of the new millennium has broad horizons – far broader than envisaged by sign studies in the first half of the 1960s.

Sebeok’s approach to the “life of signs” is “global” or “holistic” and may be immediately associated with his concern for the “signs of life”. As anticipated, in his view *semiosis* and *life* coincide. Semiosis originates with the first stirrings of life, which leads to the formulation of an axiom that is cardinal to semiotics: “semiosis is the criterial attribute of life”.

“Global semiotics” provides a meeting point and an observation post for studies on the life of signs and the signs of life. In line with the “major tradition” in semiotics, Sebeok’s global approach to sign life presupposes his critique of anthropocentric and glottocentric semiotic theory and practice. In his explorations of the boundaries and margins of the science or “doctrine” of signs (as he also calls it), Sebeok opens the field to include *zoosemiotics* (a term he introduced in 1963), or, even more broadly *biosemiotics*, on the one hand, and *endosemiotics*, on the other. In Sebeok’s conception, the sign science is not only the “science qui étudie la vie des signes au sein de la vie sociale” (Saussure 1916: 26), that is, the study of communication in culture, but also the study of communicative behavior in a biosemiotic perspective. Consequently, Sebeok’s global semiotics is characterized by a maximum broadening of competencies.

For Sebeok semiotics is more than just a science that studies signs in the sphere of socio-cultural life, as reported above, “la science qui étudie la vie des signes au sein de la vie sociale” (Saussure 1916: 26). Before contemplating the signs of unintentional communication (semiology of signification), semiotics was limited by its exclusive focus on the signs of intentional communication (semiology of communication). These were the main trends in semiology following Saussure. Instead, semiotics after Sebeok is not only *anthroposemiotics* but also *zoosemiotics*, *phytosemiotics*, *mycosemiotics*, *microsemiotics*, *machine semiotics*, *environmental semiotics* and *endosemiotics* (the study of cybernetic systems inside the organic

body on the ontogenetic and phylogenetic levels). And all this takes place under the umbrella term of *biosemiotics* or just plain *semiotics*.

In Sebeok's view, biological foundations, therefore biosemiotics, are at the epicenter of studies on communication and signification in the human animal. From this point of view, the research of the biologist Jakob von Uexküll, teacher of Konrad Lorenz and one of the cryptosemioticians most studied by Sebeok, belongs to the history of semiotics.

Sebeok's semiotics unites what other fields of knowledge and human praxis generally keep separate either for justified exigencies of a specialized order, or because of a useless and even harmful tendency toward short-sighted sectorialization. Such an attitude is not free of ideological implications, which are often poorly masked by motivations of a scientific order.

Biology and the social sciences, ethology and linguistics, psychology and the health sciences, their internal specializations – from genetics to medical semiotics (symptomatology), psychoanalysis, gerontology and immunology – all find in semiotics, as conceived by Sebeok, the place of encounter and reciprocal exchange, as well as of systematization and unification. All the same, it must be stressed that systematization and unification are not understood here neopositivistically in the static terms of an “encyclopedia”, whether this takes the form of the juxtaposition of knowledge and linguistic practices or of the reduction of knowledge to a single scientific field and its relative language (for example, neopositivistic physicalism). Global semiotics may be presented as a *metascience* that takes all sign-related academic disciplines as its field. It cannot be reduced to the status of philosophy of science, although as a science it is engaged in dialogic relation with philosophy.

Sebeok develops a view that is global thanks to his continual and creative shifts in perspective, which favors new interdisciplinary interconnections and new interpretive practices. Sign relations are identified where, for some, there seemed to exist no more than mere “facts” and relations among things, independent from communication and interpretive processes. Moreover, this continual shifting in perspective also favors the discovery of new cognitive fields and languages, which interact dialogically. They are the dialogic interpreted-interpretant signs of fields and languages that already exist. In his explorations of the boundaries and margins of the various sciences, Sebeok dubs this open nature of semiotics “doctrine of signs”.

A pivotal notion in global semiotics is “modeling”, used to explain life and behavior among living entities conceived in terms of semiosis. There-

fore, global semiotics, or what we may also call “semiotics of life”, involves modeling systems theory.

The concept of modeling is of fundamental importance in Sebeok’s semiotic research. It is adapted from the so-called Moscow-Tartu school of semioticians (A. A. Zaliznjak, V. V. Ivanov, V. N. Toporov and Juri M. Lotman), where it was introduced to denote natural language (as the “primary modeling system”) as well as other human cultural systems (as “secondary modeling systems”). However, differently from this school, Sebeok extended the concept of modeling beyond the domain of anthroposemiotics. In the light of the concept of *Umwelt* as formulated by the biologist Jakob von Uexküll, Sebeok’s concept of model may be interpreted as an “outside world model”. Thus, for Sebeok, the animal *Innenwelt* is the *primary* modeling system,¹ linguistic communication the *secondary* modeling system, and Lotman’s secondary modeling system becomes rather a *tertiary* system. And on the basis of recent research in biosemiotics, he avers that the modeling capacity is observable in all forms of life (cf. Sebeok 1991b: 49–58, 68–82, and 1994b: 117–127).

The terms introduced so far need some clarification. The study of modeling behavior in and across all life forms requires a methodological framework that has been developed in the field of biosemiotics. This methodological framework is *modeling systems theory* as proposed by Sebeok in his research on the interface between semiotics and biology. Modeling systems theory analyzes semiotic phenomena in terms of modeling processes (cf. Sebeok and Danesi 2000: 1–43).

In the light of semiotics viewed as a modeling systems theory, semiosis – a capacity pertaining to all life forms – may be defined as “the capacity of a species to produce and comprehend the specific types of models it requires for processing and codifying perceptual input in its own way” (*Ibid.* 5).

The applied study of modeling systems theory is called *systems analysis*, which distinguishes between primary, secondary and tertiary modeling systems.

The primary modeling system is the innate capacity for *simulative* modeling – in other words, it is a system that allows organisms to simulate something in species-specific ways (cf. *Ibid.* 44–45). Sebeok identifies “language in the root sense” (as distinguished from linguistic communica-

1. His view on this crucial point, expressed in various writings, has been synthesized in Deely 2007.

tion) the species-specific aspect of primary modeling system or *Innenwelt* of the species called *Homo*.

The secondary modeling system subtends both “indicational” and “extensional” modeling processes. The nonverbal form of indicational modeling has been documented in various species. Extensional modeling, on the other hand, is a uniquely human capacity because it presupposes *language* (primary modeling system), which Sebeok distinguishes from *speech* (human secondary modeling system; cf. *Ibid.* 82–95).

The tertiary modeling system subtends highly abstract, symbol-based modeling processes. Tertiary modeling systems are the human cultural systems which the Moscow-Tartu school had mistakenly dubbed “secondary” as a result of conflating “speech” and “language” (cf. *Ibid.* 120–129).

2. The question of living entities implied in semiosis

Sebeok’s article “The Evolution of Semiosis” (in Sebeok 1991b, now in Posner, Robering, and Sebeok 1997–98, I) opens with the question “what is semiosis?”, and the answer begins with a citation from Peirce. Sebeok observes that Peirce’s description (CP 5.473) of semiosis or “action of a sign” as an irreducibly triadic process or relation (sign, object, and interpretant), focuses particularly upon how the interpretant is produced, therefore it concerns that which is involved in understanding or in the teleonomic (that is, goal-directed) interpretation of the sign.

Not only do we have a sign that is a sign of something else, but we also have a “somebody”, a “*Quasi-interpretant*” (CP 4.551) that interprets something as a sign of something else. Peirce further analyzed the implications of this description when he said that: “It is of the nature of a sign, and in particular of a sign which is rendered significant by a character which lies in the fact that it will be interpreted as a sign. Of course, nothing is a sign unless it is interpreted as a sign” (CP 2.308). And again: “A sign is only a sign in actu by virtue of its receiving an interpretation, that is, by virtue of its determining another sign of the same object” (CP 5.569).

From the viewpoint of the interpretant and, therefore, of sign-interpreting activity or process of inferring from signs, *semiosis* may be described in terms of *interpretation*. Peirce specifies that all “signs require at least two *Quasi-minds*; a *Quasi-utterer* and a *Quasi-interpretant*” (CP 4.551). The interpreter, mind or quasi-mind, “is also a sign” (Sebeok 1994b: 14), exactly a response, in other words, an interpretant: an interpreter is a responsive “somebody”.

In his above-mentioned article, “The Evolution of Semiosis”, Sebeok continues his answer to the question “what is semiosis?” with a citation from Morris (1946), who defined semiosis as “a process in which something is a sign to some organism”. This definition implies effectively and ineluctably, says Sebeok, the presence of a living entity in semiotic processes. And this means that semiosis appeared with the evolution of life.

For this reason one must, for example, assume that the report, in the King James version of the Bible (Genesis I.3), quoting God as having said “Let there be light”, must be a misrepresentation; what God probably said was “let there be photons”, because the sensation of perception of electromagnetic radiation in the form of optical signals (Hailman 1977: 56–58), that is, luminance, requires a living interpreter, and the animation of matter did not come to pass much earlier than about 3,900 million years ago. (Sebeok in Posner, Robering and Sebeok 1997–98: I, 436)

In Morris’s view the living entity implied in semiosis is a macro-organism; instead, according to Sebeok’s global semiotics, it may even be a monocellular organism, a cell, a portion of a cell.

In “The Evolution of Semiosis”, Sebeok examines the question of the cosmos before semiosis and after the beginning of the Universe and refers to the regnant paradigm of modern cosmology, i.e., the Big Bang theory. Before the appearance of life on our planet – the first traces of which date back to the so-called Archaean Aeon, from 3,900 to 2,500 million years ago – there only existed physical phenomena involving interactions of nonbiological atoms, later of inorganic molecules. Such interactions may be described as “quasi-semiotic”. But the notion of “quasi-semiosis” must be distinguished from “protosemiosis” as understood by the Italian oncologist Giorgio Prodi² (cf. 1977). (To Prodi, described as a “bold trailblazer of contemporary biosemiotics”, is dedicated the milestone volume *Biosemiotics*, edited by Sebeok and Umiker-Sebeok, 1992). In fact, in the case of physical phenomena, Sebeok considers the notion of “protosemiosis” to be metaphorical on the basis of his view that semiosis concerns life. He distinguishes between nonbiological interactions, on the

2. Giorgio Prodi (1928–1987) “was, on the one hand, one of his country’s leading medical biologists in oncology, while he was, on the other, a highly original contributor to semiotics and epistemology, the philosophy of language and formal logic, plus a noteworthy literary figure. Prodi’s earliest contribution to this area [immunosemiotics, an important branch of biosemiotics], [is] ‘le basi materiali della significazione [1978]’” (Sebeok, “Foreword” in Capozzi ed. 1997: xiv).

one hand, and “primitive communication”, on the other, which refers to information transfer through endoparticles, as in neuron assemblies where transfer in modern cells is managed by protein particles.

Since there is not a single example of life yet established outside our terrestrial biosphere, the question of whether there is life/semiosis elsewhere in our galaxy, let alone in deep space, is wide open. Therefore, says Sebeok, one cannot but hold “exobiology semiotics” and “extra-terrestrial semiotics” to be twin sciences that so far remain without a subject matter.

In the light of information today, all this implies in Sebeok’s view, that at least one link in the semiotic loop must necessarily be a living and terrestrial entity: this may even be a mere portion of an organism or an artifact extension fabricated by human beings, inasmuch as semiosis is terrestrial biosemiosis. As stated, a pivotal concept in Sebeok’s research is that semiosis and life coincide. Semiosis is considered as the criterial feature that distinguishes the animate from the inanimate, and sign processes have not always existed in the course of the development of the universe: sign processes and the animate originated together with the development of life. Yet, as indicated above (Petrilli 2008: 6–7; Deely 2009: Chap. 12, esp. Section 4, 257–269), the question of the extent of semiosis – whether it extends even wider than does life – is not a settled question; but at the time of his death, Sebeok favored the conservative hypothesis.

3. The extension of biosemiotics in Sebeok’s work

Over a decade, Sebeok published a tetralogy formed of *Contributions to the Doctrine of Signs* (1976), *The Sign & Its Masters* (1979), *The Play of Musement* (1981), *I Think I Am a Verb* (1986). Since then other important volumes followed in rapid succession. These include: *Essays in Zoo-semiotics* (1990), *American Signatures: Semiotic Inquiry and Method* (1991a), *A Sign is Just a Sign* (1991b), *Semiotics in the United States* (1991c), *Signs. An Introduction to Semiotics* (1994b), *Come comunicano gli animali che non parlano* (1998), *Global Semiotics* (2001b), without forgetting important earlier volumes such as *Perspectives in Zoosemiotics* (1972), plus numerous others under his editorship including *Animal Communication* (1968), *Sight, Sound, and Sense* (1978), and *How Animals Communicate* (1977). Rather than continue his long list of publications, it will suffice to remember that Sebeok had been publishing since 1942.

Identification of semiosis and life invests semiotics with a completely different role from that traditionally conceived. Sebeok interprets and practices semiotics as a life science, as biosemiotics: nor can biosemiotics be reduced to its interpretation as a mere “sector” or “branch” of semiotics. Sebeok’s semiotic universe comprises the following:

- The life of signs and the signs of life as they appear today in the biological sciences.
- The signs of animal life and of specifically human life, of adult life, and of the organisms’s relations with the environment, the signs of normal or pathological forms of dissolution and deterioration of communicative capabilities.
- Human verbal and nonverbal signs. Human nonverbal signs include signs that depend on natural languages and signs that, on the contrary, do not depend on natural language and therefore transcend the categories of linguistics. These include the signs of “parasitic” languages, such as artificial languages, the signs of “gestural languages”, such as the sign languages of Amerindian and Australian aborigines, and the language of deaf-mutes; the signs of infants, and the signs of the human body, both in its more culturally dependent manifestations as well as its natural-biological manifestations.
- Human intentional signs controlled by the will, and unintentional, unconscious signs such as those that pass in communication between human beings and nonhuman animals in “Clever Hans” cases (cf. Sebeok 1979, 1986; and Sebeok and Rosenthal 1981). In such contexts, animals seem capable of certain performances (for example, counting), simply because they respond to unintentional and involuntary suggestions from their trainers. This group includes signs at all levels of conscious and unconscious life, and signs in all forms of lying (which Sebeok identifies and studies in animals as well), deceit, self-deceit, and good faith.
- Signs at a maximum degree of plurivocality and, on the contrary, signs that are characterized by univocality, and therefore are signals.
- Signs viewed in all their shadings of indexicality, iconicity, and symbolicity.
- Finally, “signs of the masters of signs”. Those through which it is possible to trace the origins of semiotics (for example, in its ancient relation to divination and to medicine), or through which we may identify the scholars who have contributed directly or indirectly (as “cryptosemioticians”) to the characterization and development of this

science, or “signs of the masters of signs” through which we may establish the origins and development of semiotics relatively to a given nation or culture, as in Sebeok’s study on semiotics in the United States (Sebeok 1991b). “Signs of the masters of signs” also include the narrative signs of anecdotes, testimonies and personal memoirs that reveal these masters not only as scholars but also as persons – their character, behavior, daily habits. Not even these signs, “human, too human”, escape Sebeok’s semiotic interests.

As emerges from Sebeok’s research, the unifying function of semiotics may be considered keeping account of three strictly interrelated aspects, all belonging to the same interpretive practice highly characterized by abductive creativity:

- 1) *The descriptive-explanatory aspect.* Semiotics singles out, describes and explains signs, that is, interpreted-interpretant relationships, forming events.
- 2) *The methodological.* Semiotics is also the search for methods of inquiry and acquisition of knowledge, both ordinary and scientific knowledge. From this point of view, and differently from the first aspect, semiotics does not limit itself simply to describing and explaining, but it also makes proposals concerning cognitive behavior. Under this aspect as well, then, semiotics overcomes the tendency toward parochial specialism among the sciences, and therefore toward separation.
- 3) *The ethical aspect.* Under this aspect, the unifying function of semiotics concerns proposals and practical orientations for human life in its wholeness (from the overall point of view of its biological and socio-cultural aspects). The focus is on what may be called the “problem of happiness”.

Concerning the third aspect of the unifying function of semiotics, particular attention is paid to recovering the connection with what is considered and experienced as separate. In today’s world, the logic of production and the rules that govern the market, where anything may be exchanged and commodified, threaten to render humanity ever more insensitive to nonfunctional and ambivalent signs. These may range from vital signs forming the body to the seemingly futile signs of phatic communication with others. Reconsideration of these signs and their relative interrelations is absolutely necessary in the present age for improvement of the quality of life. Indeed, production and marketing in globalization

today impose ecological conditions which make communication between self and body, as well as with the environment ever more difficult and distorted (cf. “The Semiotic Self”, in Sebeok 1979; cf. also Sebeok, Ponzio, Petrilli 2001). Moreover, this third aspect of semiotics operates in such a way as to connect rational worldviews to myth, legend, fable and all other forms of popular tradition with a focus on the relation of humans to the world about them. This third function is rich with implications for human behavior: the signs of life that today we cannot or do not wish to read, or those signs of life that we do not know how to read, may one day recover their importance and relevance for humanity.

The study of sign function has often been considered sufficient for an understanding of the nature of signs. On the contrary, Sebeok draws attention to problem of the functioning of signs as an end in itself, which represents a sort of excess with respect to the function and purpose of signs. Such excess is visible, for example, in ritual behavior among human beings and animals, but also in language. In fact, beyond its communicative function, language may be considered as a sort of game, in terms of the “play of musement” we might say with Peirce and with Sebeok, without which such activities as imagination, fantasy, or highly abductive reasoning would never be possible.

4. Semiotics as species-specific human semiosis

Sebeok most significantly added another meaning to the term “semiotics” beyond “the general science of signs”: that is, as indicating *the specificity of human semiosis*. This concept is clearly formulated in a paper of 1989, “Semiosis and Semiotics: What Lies in Their Future?” (in Sebeok 1991b: 97–99), and is of vital importance for a *transcendental founding of semiotics* given that it explains how semiotics as a science and metascience is possible. He writes (1991: 97):

Semiotics is an exclusively human style of inquiry, consisting of the contemplation – whether informally or in formalized fashion – of semiosis. This search will, it is safe to predict, continue at least as long as our genus survives, much as it has existed, for about three million years, in the successive expressions of Homo, variously labeled – reflecting, among other attributes, a growth in brain capacity with concomitant cognitive abilities – habilis, erectus, sapiens, neanderthalensis, and now s. sapiens. Semiotics, in other words, simply points to the universal propensity of the human mind for reverie focused specularly inward upon its own long-term cognitive strategy and daily maneuverings. Locke designated this quest as a search for “humane understanding”; Peirce, as “the play of musement”.

In “The Evolution of Semiosis”, Sebeok explains the correspondences between the various branches of semiotics and the different types of semiosis, from the world of microorganisms to the Superkingdoms and the human world. Specifically human semiosis, anthroposemiosis, is represented as “semiotics” thanks to a species specific “modeling device” that Sebeok calls “language”. Such an observation is based on the fact that it is virtually certain that *Homo habilis* was endowed with language, but not speech (cf. Sebeok in Posner, Robering, and Sebeok 1997–98: I, 443).

Sebeok claimed that human verbal language is species-specific. On this basis and often with cutting irony he debated against the enthusiastic supporters of projects which had been developed to teach verbal language to captive primates. Such behavior was based on the false assumption that animals might be able to talk, or even more scandalously, that they are endowed with the capacity for language. The distinction established by Sebeok between *language* and *speech* (1984) is not only a response to wrong conclusions regarding animal communication, but it also constitutes a general critique of phonocentrism and the general tendency to base scientific investigation on anthropocentric principles.

According to Sebeok, language appeared and evolved as an *adaptation* much earlier than speech in the evolution of the human species through to *Homo sapiens*. Language is not a communicative device (a point on which Sebeok is in accord with Noam Chomsky, though Chomsky does not make the same distinction between *language* and *speech*); in other words, the specific function of language is not to transmit messages or to give information.

Instead, Sebeok described language as part of the *Innenwelt* as the *primary modeling device*. Every species is endowed with a model that “produces” its own world, and “language” is the name of the biologically underdetermined aspect of that model that belongs to human beings. However, as a unique part of *Innenwelt* as a modeling device, human language is completely different from the modeling devices of other life forms. Its distinctive feature is what the linguists call *syntax*, that is, the capacity to order single elements on the basis of operational rules. But while for linguists these elements are the words, phrases, and sentences, etc. of historical-natural languages, i.e., language as adapted to constitute species-specifically human communication, Sebeok’s reference was to a *mute syntax* – “language” as adaptation prior to “language” as adaptation. Thanks to syntax, human language, understood not as a historical-natural language but as belonging to the primary modeling device, is similar to Lego building blocks. It can reassemble a limited number of

construction pieces in an infinite number of different ways. As a modeling device, language can produce an indefinite number of models; in other words, the same pieces can be taken apart and put together to construct an infinite number of different models.

And thanks to language thus described, not only do human animals produce worlds similarly to other species, but they may also produce an infinite number of possible worlds (as Leibniz also claimed). This leads us back to the question of the “play of musement”, a human capacity that Sebeok, following Peirce, considered no less than fundamental in scientific research and all forms of investigation, and not only in fiction and all forms of artistic creation.

Similarly to language, speech too made its appearance, but as an *exaptation* of language as an *adaptation*, an exaptation *for the sake of communication*, and much later than language – precisely with *Homo sapiens*. Speech organizes and externalizes language, such that language ends up becoming a communication device through processes of *exaptation*, in the language of evolutionary biologists (cf. Gould and Vrba 1982: 4–15), enhancing nonverbal capabilities already possessed by human beings; and making of speech in turn (linguistic communication) a secondary modeling system, as discussed above.

5. Humility of a life dedicated to research: biosemiotics as a doctrine

Despite such a totalizing approach to semiotics, it is noteworthy that Sebeok used neither the ennobling term “science” nor the term “theory” to name it. Instead, he repeatedly favored the expression “doctrine of signs”, adapted from Locke (as earlier in Poinset and later in Peirce) who asserted that a doctrine is a body of principles and opinions that vaguely form a field of knowledge. This is to say that Sebeok invested semiotics not only with the task of observing and describing phenomena, in this case signs, but also of interrogating the conditions of possibility that characterize and specify signs for what they are, as emerges from observation (necessarily limited and partial), and for what they must be (cf. his Preface to Sebeok 1976).

This humble and at once ambitious character of the “doctrine of signs” led Sebeok to a critical interrogation *à la* Kant of its very conditions of possibility: the doctrine of signs is the science of signs that questions itself, attempts to answer for itself, and inquires into its very own foundations. As a doctrine of signs, semiotics also presents itself as an exercise in

philosophy not because it deludes itself into believing that it is a substitute philosophy, but simply because it *does not* delude itself into believing that the study of signs is possible without keeping account of philosophical questions that regard its conditions of possibility.

For Sebeok, no aspect of sign life must be excluded from semiotic musings, just as no limits are acceptable on semiotics itself, whether contingent or deriving from epistemological conviction. Yet, contrary to first impressions, Sebeok's work does not claim the status of scientific or philosophical omniscience, or the ability to solve all problems indiscriminately.

We believe that Sebeok's awareness of the vastness, variety and complexity of the territories he was committed to exploring and of the problems he analyzed, demonstrates a sense of utmost prudence – sensitivity to problems and humility in the interpretations he offered. This is true not only in his adventures over the treacherous territory of signs, but still more in relation to the deceptive sphere of the signs of signs – the place of his semiotic probings.

References

- Anderson, Myrdene, and floyd merrell, Editors
1991 *On Semiotic Modeling* (=Approaches to Semiotics 97; Berlin and New York: Mouton de Gruyter).
- Baer, Eugen
1987 “Thomas A. Sebeok's Doctrine of Signs”, in *Classics of Semiotics*, ed. M. Krampen et al. (New York: Plenum), 81–210.
- Bernard, Jeff
1997 “Thomas A. Sebeok und die Zeichen des Lebens”, in *Jenseits von Kunst*, ed. P. Weibel (Wien: Passagen Verlag), 739–740.
- Bouissac, Paul, Michael Herzfeld, and Roland Posner
1986 *Iconicity. Essays on Nature and Culture. Festschrift for Thomas A. Sebeok on the his 65th birthday* (Tübingen: Stauffenburg).
- Chomsky, Noam
1986 *Knowledge of Language. Its Nature, Origin, and Use* (New York: Praeger).
- Chomsky, Noam
1988 *Language and Problems of Knowledge* (Cambridge, MA: MIT Press).
- Cobley, Paul, Editor
2001 *The Routledge Companion to Semiotics and Linguistics* (London and New York: Routledge).

- Cobley, Paul, and Litza Jansz
 1997 *Introducing Semiotics* (Cambridge, England: Icon Books; New York: Totem Books).
- Colapietro, Vincent M., and Thomas M. Olszewsky, Editors
 1996 *Peirce's Doctrine of Signs: Theory, Applications, and Connections* (Berlin: Mouton de Gruyter).
- Danesi, Marcel
 1998 *The Body in the Sign: Thomas A. Sebeok and Semiotics* (Ottawa, Canada: Legas).
- Danesi, Marcel, Susan Petrilli, and Augusto Ponzio
 2004 *Semiotica globale. Il corpo nel segno* (English trans. of Danesi's section by S. Petrilli; Bari: Graphis).
- Deely, John
 1995 *Thomas A. Sebeok. Bibliography. 1942–1995* (Bloomington, Indiana: Eurolingua).
- Deely, John
 1998 "Sebeok, Thomas A. (1920–2001)", entry for the *Encyclopedia of Semiotics*, ed. Paul Bouissac (New York: Oxford University Press), 557–559.
- Deely, John
 2001 *Four Ages of Understanding* (Toronto, Canada: University of Toronto Press).
- Deely, John
 2002 *What Distinguishes Human Understanding?* (South Bend, IN: St. Augustine's Press).
- Deely, John
 2004 *Basi della semiotica* (expanded 3rd ed. of Deely 1990, trans. Massimo Leone; Bari, Italy: Edizione Giuseppe Laterza).
- Deely, John
 2005 "Thomas Albert Sebeok (1920–2001), Biologist Manqué", in *The Dictionary of Modern American Philosophers* (London: Thoemmes Press).
- Deely, John
 2007 "The Primary Modeling System in Animals", in *La Filosofia del Linguaggio come arte dell'ascolto: sulla ricerca scientifica di Augusto Ponzio* | *Philosophy of Language as the art of listening: on Augusto Ponzio's scientific research*, ed. Susan Petrilli (Bari, Italy: Edizione dal Sud), 161–179.
- Deely, John
 2009 "The Full Vista of the Action of Signs", Chap. 12 in expanded 5th edition of *Basics of Semiotics* (=Tartu Semiotics Library 4.2; Tartu, Estonia: Tartu University Publications), 233–275.
- Deely John, and Susan Petrilli, Guest-Editors
 1993 "Semiotics in the United States and Beyond: Problems, People, and Perspectives", *Semiotica*. Special issue 97–3/4.

- Deely, John, Vilmos Voigt, Jeff Bernard, and Gloria Withalm, Editors
 1993 *Symbolicity*, Proceedings of the September 29–4 October 1990 Budapest-Vienna International Semioticians' Conference, (=Sources in Semiotics XI; Lanham, MD: University Press of America). Bound together with the *Semiotics 1990* volume.
- Fano, Giorgio
 1972 *Origini e natura del linguaggio* (Turin: Einaudi); English trans. with Introduction by S. Petrilli, *The Origins and Nature of Language* (Bloomington: Indiana University Press, 1992).
- Gould, Stephen J., and Elisabeth S. Vrba
 1982 "Exaptation – A Missing Term in the Science of Form", *Paleobiology* 8.1 (Winter), 4–15.
- Hediger, Heini
 1968 *The Psychology and Behaviour of Animals in Zoos and Circuses* (New York: Dover).
- Hediger, Heini
 1980 *Tiere verstehen: Erkenntnisse eines Tierpsychologen* (München: Kindler).
- Jakobson, Roman
 1974 "Coup d'oeil sur le développement de la sémiotique", in *Panorama sémiotique—2A Semiotic Landscape*, Proceedings of the First Congress of the International Association for Semiotic Studies, Milan, June 1974, ed. Seymour Chatman, Umberto Eco, and Jean-Marie Klinkenberg (The Hague: Mouton, 1979), 3/18. Published separately under the same title by the Research Center for Language and Semiotic Studies as a small monograph (= *Studies in Semiotics* 3; Bloomington: Indiana University Publications, 1975).
- Krampen, Martin
 1981 "Phytosemiotics", *Semiotica* 36, 187–209.
- Lotman, Jurij M.
 1975 *La semiosfera* (Venice: Marsilio).
- Lotman, Jurij M.
 1967 "Primary and Secondary Communication-Modeling Systems", in Lucid ed. 1977: 95–98.
- Lucid, Daniel P., Editor
 1977 *Soviet Semiotics. An Anthology* (Baltimore: John Hopkins University Press).
- Morris, Charles W.
 1938 "Foundations of the Theory of Signs", in *International Encyclopedia of Unified Science I* (2) (Chicago: University of Chicago Press).
- Morris, Charles W.
 1946 *Signs, Language, and Behavior* (New York: Prentice Hall).
- Morris, Charles W.
 1948 *The Open Self* (New York: Prentice-Hall).

- Morris, Charles W.
1964 *Signification and Significance. A Study of the Relations of Signs and Values* (Chicago: University of Chicago Press).
- Ogden, Charles K. and Ivor A. Richards
1923 *The Meaning of Meaning. A Study of the Influence of Language upon Thought and of the Science of Symbolism*, with supplementary essays by B. Malinowski and F. G. Crookshank (London: Routledge and Kegan Paul; New York: Harcourt Brace Jovanovich, 1989).
- Peirce, Charles Sanders
i.1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Fictae Disjecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Petrilli, Susan
1986 “On the Materiality of Signs”, *Semiotica* 62–3/4, 223–245.
- Petrilli, Susan
1988 *Significs, semiotica, significazione* (Bari, Adriatica), with a Preface by Sebeok 1988: 15–18.
- Petrilli, Susan
1991 “From Peirce (via Morris and Jakobson) to Sebeok: Interview with Thomas A. Sebeok” in T. A. Sebeok 1991c: 95–105.
- Petrilli, Susan
1992 “Introduction” to Petrilli ed. 1992: 1–32.
- Petrilli, Susan
1993 “Thomas A. Sebeok and Semiotics in the United States in the Panorama of Recent Developments in Italian semiotics”, in Deely and Petrilli eds. 1993: 337–372.
- Petrilli, Susan
1995a *Materia signica e interpretazione* (Lecce: Milella).
- Petrilli, Susan
1995b “For a Global Approach to Semiosis”, *Cruzeiro Semiotico* (September), 27–36.
- Petrilli, Susan
1995 “La Iconicidad en la ‘Doctrina de los signos’ de Thomas A. Sebeok”, *Cruzeiro Semiotica*, Sept., pp. 303–313.
- Petrilli, Susan
1996 *Che cosa significa significare?* (Bari: Edizioni dal Sud).

- Petrilli, Susan
1998a *Su Victoria Welby. Significs e filosofia del linguaggio* (Naples: Edizioni Scientifiche Italiane).
- Petrilli, Susan
1998b *Teoria dei segni e del linguaggio* (Bari: Graphis; reprinted 2001).
- Petrilli, Susan
1999a “About and Beyond Peirce”, *Semiotica* 124–3/4, 299–376.
- Petrilli, Susan
1999b “Charles Morris’s Biosemiotics”, *Semiotica* 127–1/4, 67–102.
- Petrilli, Susan
1999c “Semiotic Phenomenology of Predicative Judgment”, *Semiotic Studies in Bari. S: European Journal for Semiotic Studies* Special Issue, Vol. II-4., 563–594.
- Petrilli, Susan
1999d “The Biological Basis of Victoria Welby’s Significs”, *Semiotica* 127–1/4: 23–66.
- Petrilli, Susan
2003 “Introduction” to Petrilli ed. 2003: 15–25.
- Petrilli, Susan
2005 *Percorsi della semiotica* (Bari: Graphis).
- Petrilli, Susan, Editor
1992 “The Correspondence Between Morris and Rossi-Landi”, *Semiotica* Special Issue 88–1/2.
- Petrilli, Susan, Editor
1999 *Semiotic Studies in Bari. S: European Journal for Semiotic Studies*. Special Issue, Vol. II-4.
- Petrilli, Susan, Editor
2003 *Linguaggi* (Bari: Laterza).
- Petrilli, Susan, and Augusto Ponzio
2005 *Semiotics Unbounded* (Toronto: University of Toronto Press).
- Ponzio, Augusto
1989 “Semiotics and Marxism”, in *The Semiotic Web*, ed. T. A. Sebeok and J. Umiker-Sebeok (Berlin-New York: Mouton De Gruyter), 387–414.
- Ponzio, Augusto
1990a *Man as a Sign. Essays on the Philosophy of Language*, trans. and ed. S. Petrilli. Appendix I & II by S. Petrilli (Berlin: Mouton de Gruyter).
- Ponzio, Augusto
1994b *Fondamenti di filosofia del linguaggio* (with Patrizia Calefato and Susan Petrilli) (Rome and Bari: Laterza), reprinted 1999.
- Ponzio, Augusto, and Susan Petrilli
1998 *Signs of Research on Signs*, in *Semiotische Berichte* (Österreichischen Gesellschaft für Semiotik, Special Issue), Jg. 22, 3/4.

- Ponzio, Augusto, and Susan Petrilli
 2001 *Sebeok and the Signs of Life* (London: Icon Books).
- Ponzio, Augusto, and Susan Petrilli
 2002 *I segni e la vita. La semiotica globale di Thomas A. Sebeok* (Milan: Spirali).
- Ponzio, Augusto, and Susan Petrilli
 2003 *Semioetica* (Rome: Meltemi).
- Posner, Roland, Klaus Robering, and Thomas A. Sebeok, Editors
 1997–2004 *Semiotik|Semiotics. A Handbook on the Sign-Theoretic Foundations of Nature and Culture* (Berlin: Walter de Gruyter), 3 volumes.
- Prodi, Giorgio
 1977 *Le basi materiali della significazione* (Milan: Bompiani).
- Prodi, Giorgio
 1982 *La storia materiale della logica* (Milan: Bompiani).
- Prodi, Giorgio
 1983a *L'uso estetico del linguaggio* (Bologna: Il Mulino).
- Prodi, Giorgio
 1983b "Linguistica e biologia", in *Intorno alla linguistica*, Segre ed. 1983: 172–201.
- Rossi-Landi, Ferruccio
 1953 *Charles Morris. Una semiotica novecentesca* (Milan: Bocca; reprinted Milan: Feltrinelli, 1975).
- Rossi-Landi, Ferruccio
 1967 "Presentazione di tre scritti di Charles Morris sulla semiotica estetica", *Nuova Corrente* 42–43, 113–117.
- Rossi-Landi, Ferruccio
 1975a "Signs about a Master of Signs", *Semiotica* XIII, 2, 115–197. Now in F. Rossi-Landi 1992: 17–57.
- Rossi-Landi, Ferruccio
 1992 *Between Signs and Non-signs*, ed. and Intro. S. Petrilli (Amsterdam: John Benjamins).
- Rossi-Landi, Ferruccio
 1999 Introduzione to Ch. Morris, *Lineamenti di una teoria dei segni* (1st ed. 1954; new ed. S. Petrilli, Lecce: Manni).
- Rudy, Stephen
 1986 "Semiotics in the USSR", in *The Semiotic Sphere*, ed. T. A. Sebeok and J. Umiker-Sebeok (New York: Plenum Press), Chapter 25.
- Sebeok, Thomas A.
 1963 "Communication among Social Bees, Porpoises and Sonar, Man and Dolphin", *Language* 39, 448–466.
- Sebeok, Thomas A.
 1967 "Discussion of Communication Processes", in *Social Communication Among Primates*, ed. S. A. Altmann (Chicago: The University of Chicago Press), 363–369.

- Sebeok, Thomas A.
 1972 *Perspectives in Zoosemiotics* (The Hague: Mouton).
- Sebeok, Thomas A.
 1974 "Semiotics: A Survey of the State of the Arts", in *Current Trends in Linguistics*, ed. T. A. Sebeok, 12 (1-2) (The Hague: Mouton), 211-264.
- Sebeok, Thomas A.
 1976 *Contributions to the Doctrine of Signs* (Bloomington, IN, and Lisse, Netherlands: Publication of the Research Center for Language and Semiotic Studies of Indiana University, together with The Peter De Ridder Press). Reprinted with an extended Prefatory Essay by Brooke Williams, "Challenging Signs at the Crossroads", evaluating the book in light of major reviews (=Sources in Semiotics IV; Lanham, MD: University Press of America, 1985).
- Sebeok, Thomas A.
 1977 "Zoosemiotic Components of Human Communication", in Sebeok ed. 1977: 1055-1077.
- Sebeok, Thomas A.
 1989 *The Sign & Its Masters* (=Sources in Semiotics VIII; Lanham, MD: University Press of America). Corrected reprint of the University of Texas Press 1979 original imprint with a new author's Preface and an Introduction by John Deely, "A Global Enterprise", pp. vii-xiv.
- Sebeok, Thomas A.
 1981a *The Play of Musement* (Bloomington: Indiana University Press).
- Sebeok, Thomas A.
 1981b "The Image of Charles Morris", in *Zeichen über Zeichen über Zeichen*, ed. A. Eschbach (Tübingen: Gunter Narr), 267-284.
- Sebeok, Thomas A.
 1982 "Peirce in Italia", *Alfabeta* 35.
- Sebeok, Thomas A.
 1984 June 3. "The Evolution of Communication and the Origin of Language", lecture in the June 1-3 ISISSS '84 Colloquium on "Phylogeny and Ontogeny of Communication Systems". Published under the title "Communication, Language, and Speech. Evolutionary Considerations", in Sebeok 1986: 10-16.
- Sebeok, Thomas A.
 1986 *I Think I Am a Verb* (New York and London: Plenum Press).
- Sebeok, Thomas A.
 1987 "Messages in the Marketplace", in *Marketing and Semiotics: New Directions in the Study of Signs for Sale*, ed. J. Umiker-Sebeok (Berlin: Mouton de Gruyter).
- Sebeok, Thomas A.
 1989a "Darwinian and Lamarckian Evolution of Semiosis", lecture prepared for delivery at the International Colloquium on the

- Evolution of Culture, Sept., 22, 1988, Villa Vigoni Bochum: Norbert Brockmeyer (never published).
- Sebeok, Thomas A.
1989b "Semiosis and Semiotics: What Lies in Their Future?", in Sebeok 1991b: 97–99.
- Sebeok, Thomas A.
1990 *Essays in Zoosemiotics*, ed. M. Danesi (Toronto: University of Toronto Press).
- Sebeok, Thomas A.
1991a *American Signatures. Semiotic Inquiry and Method*, ed. and introduced by Iris Smith (Norman, OK: Oklahoma University Press).
- Sebeok, Thomas A.
1991b *A Sign Is Just a Sign* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
1991c *Semiotics in the United States* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
1992 "Von Vico zu Cassirer zu Langer", *S: European Journal für Semiotic Studies* 4.1/2, 207–222.
- Sebeok, Thomas A.
1994a "Global Semiotics", in *Semiotics Around the World: Synthesis in Diversity*, ed. I. Rauch and G. F. Carr (Berlin: Mouton de Gruyter; reprinted in Sebeok 2001, and in Italian trans. "La semiotica globale" by S. Petrilli in 1998a).
- Sebeok, Thomas A.
1994b *Signs. An Introduction to Semiotics* (Toronto: University of Toronto Press; reprinted 2001); Italian trans. introduced and ed. S. Petrilli, *Segni. Introduzione alla semiotica* (Rome: Carrocci, 2004).
- Sebeok, Thomas A.
1995 *Bibliography 1942–1995*. See Deely, ed. 1995.
- Sebeok, Thomas A.
1997 "Foreword" to *Reading Eco. An Anthology*, ed. Rocco Capozzi (Bloomington: Indiana University Press, 1997), xi–xvi.
- Sebeok, Thomas A.
1998a *Come comunicano gli animali che non parlano*, It. trans. ed. and Intro. S. Petrilli. Bari: Edizioni dal Sud. (This volume, edited by Susan Petrilli, is only available in Italian).
- Sebeok, Thomas A.
1998b "The Cognitive Self and the Virtual Self", in *New Approaches to Semiotics and The Human Sciences*, ed. W. Pencak and J. R. Lindgren (New York: Peter Lang), 307–321.

- Sebeok, Thomas A.
 2000a "Some Reflections of Vico in Semiotics", in *Functional Approaches to Language, Culture and Cognition*, ed. D. G. Lockwood, P. H. Fries, and J. E. Copeland (=Current Issues in Linguistic Theory, Vol. 163; Amsterdam: John Benjamins).
- Sebeok, Thomas A.
 2000b "Semiotics as a Bridge between Humanities and Sciences", in *Semiotics as a Bridge between the Humanities and the Sciences*, ed. P. Perron, L. Sbrocchi, P. Colilli, and M. Danesi (Ottawa: Legas), 76–100.
- Sebeok, Thomas A.
 2000c "La comunicazione non verbale", Italian trans. E. Zoni, *Parol-Quaderni d'arte* 15, 9–32.
- Sebeok, Thomas A.
 2001a *Global Semiotics* (Bloomington: Indiana University Press).
- Sebeok, Thomas A.
 2001b "Nonverbal communication", in Copley Ed. 2001: 14–27.
- Sebeok, Thomas A.
 2001c *The Swiss Pioneer in Nonverbal Communication Studies. Heini Hediger* (Ottawa, Canada: Legas).
- Sebeok, Thomas A., Editor
 1968 *Animal Communication: Techniques of Studies and Results of Research* (Bloomington: Indiana University Press).
- Sebeok, Thomas A., Editor
 1977 *How Animals Communicate* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
 1978 *Sight, Sound and Sense* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., and Marcel Danesi
 2000 *The Forms of Meanings. Modeling Systems Theory and Semiotic Analysis* (Berlin: Mouton de Gruyter).
- Sebeok, Thomas A., Jesper Hoffmeyer, and Claus Emmeche, Editors
 1999 "Biosemiotics", *Semiotica* Special Issue 127–1/4.
- Sebeok, Thomas A., Susan Petrilli, and Augusto Ponzio
 2001 *Semiotica dell'io* (Rome: Meltemi).
- Sebeok, Thomas A., Sydney M. Lamb, and John O. Regan
 1988 *Semiotics in Education. A Dialogue* (=Issue of Communication 10; Claremont, CA: Claremont Graduate School).
- Sebeok, Thomas A., and Robert Rosenthal, Editors
 1981 *The Clever Hans Phenomenon: Communication with Horses, Whales, Apes, and People* (New York: The New York Academy of Sciences).

- Sebeok, Thomas A., and Susan Petrilli
 1998 "Women in Semiotics", in *Interdigitations: Essays for Irmengard Rauch*, ed. G. F. Carr *et alii* (Bristol, England: Thoemmes Publisher, 469–478); now in Sebeok 2001: 145–153.
- Sebeok, Thomas A., Susan Petrilli, and Augusto Ponzio
 2001 *Semiotica dell'io* (Rome: Meltemi).
- Sebeok, Thomas A., and Jean Umiker-Sebeok, Editors
 1980 *'You Know My Method': A Juxtaposition of Charles S. Peirce and Sherlock Holmes*. Bloomington: Gaslight.
- Sebeok, Thomas A., and Jean Umiker-Sebeok, Editors
 1992 *Biosemiotics. The Semiotic Web 1991* (Berlin: Mouton de Gruyter).
- Segre, Cesare, Editor
 1983 *Intorno alla linguistica* (Milan: G. Feltrinelli).
- Tarasti, Eero, Editor
 2000 *Commentationes in Honorem Thomas A. Sebeok Octogenarii* (Imatra, Finland: International Semiotics Institute).
- Tasca, Norma, Editor
 1995 "Essays in Honour of Thomas A. Sebeok", Special Issue of *Cruzerio Sémiotico* 22–25.
- Uexküll, Gudrun von
 1964 *Jakob von Uexküll, seine Welt un seine Umwelt. Eine Biographie* (Hamburg: Christian Wegner Verlag).
- Uexküll, Jakob von
 1909 *Umwelt und Innenwelt der Tiere* (Berlin: Springer Verlag).
- Uexküll, Jakob von
 1992 "Jakob von Uexküll's 'A Stroll through the Worlds of Animals and Men'", ed. with a Preface and Introduction by T. von Uexküll, *Semiotica*, Special Issue 89. 4.
- Uexküll, Thure von
 1981 "The Sign Theory of Jakob von Uexküll", in *Classics of Semiotics*, ed. M. Krampen *et al.* (London-New York: Plenum), 147–179.
- Uexküll, Thure von
 1982 "Semiotics and Medicine", *Semiotica* 38–3/4, 205–215.
- Uexküll, Thure von
 1986 "Medecine and Semiotics", *Semiotica* 61–3/4, 201–217.
- Uexküll, Thure von
 1989 "Jakob von Uexküll's Umwelt-Theory", in *The Semiotic Web 1988*, ed. Thomas A. Sebeok and Jean Umiker-Sebeok (Berlin: Mouton De Gruyter), 129–158.
- Uexküll, Thure von, and Wolfgang Wesiack
 1988 *Theorie der Humanmedizin: Grundlagen ärztlichen Denkens und Handelns* (Munich: Urban & Schwarzenberg).
- Zaliznjak, A. A. *et alii*
 1977 "Structural-Typological Study of Semiotic Modeling Systems", in Lucid ed. 1977.

Chapter 16

Thomas A. Sebeok, Hybrid Joke-teller¹

Augusto Ponzio

We all know that Thomas A. Sebeok liked to tell jokes as well as anecdotes, especially hybrid jokes. This was connected with his “professional activity”. In fact jokes, as a rule, are considered as “one form of narration”, hence a type of verbal art, even though they are normally accompanied by various gestural elements as accessories (manual and facial expressions, postures, and the like) which reinforce the facetiousness conveyed by the verbal expressions. But hybrid jokes are narratable only up to a point: the climax, and also sometimes several internal punch lines, can be delivered *only* by means of gestures.

Why did Sebeok take a “professional” interest in this subgenre of jokes? Because it confirms his critique of phonocentrism, a critique that is topical in his conception of semiotics, or doctrine of signs, as he says. All jokes are intrinsically pansemiotic configurations, in which the verbal twist is typically primary. Consequently, jokes cannot be conveyed solely by nonverbal means. Yet hybrid jokes, if delivered face-to-face, must be accompanied by appropriate gesticulation. Their humor cannot be satisfyingly, fully, imparted in the dark, or over the phone. If communicated in script they must be illustrated by pictorial displays of various sorts. The funniness of the verbal portion of a hybrid joke falls off in proportion to gestural or pictorial visual elaboration.

Sebeok dedicated an essay to hybrid jokes originally published in *Athanos*, X.2 (1999/2000), *La traduzione*, edited by di S. Petrilli, and now in *Global Semiotics* (Sebeok 2001a).

Sebeok extends the boundaries of traditional semiotics (as “semiology”), which is vitiated by the fundamental error of mistaking a part (that is, human signs and in particular verbal signs) for the whole (that is, all possible signs, human and nonhuman). On the contrary, Sebeok’s “global semiotics”, as described above, is the place where the “life sciences” and the “sign sciences” converge, therefore the place of consciousness of the fact that the human being is a sign in a universe of signs. Such an approach presupposes a critique of anthropocentrism and of glotto-

1. Translation from Italian by Susan Petrilli.

centrism with the indubitable positive effects of such a critique when there is a question of developing educational aims and methods.

Stressing the species-specific character of human language, Sebeok, with Jean Umiker-Sebeok, intervened polemically and ironically with regard to the enthusiasm (which he attempted to cool down) displayed for theories and practices developed for training animals, based on the assumption that animals can talk (cf. Sebeok 1986: Chap. 2) Furthermore, the distinction between *language* and *speech*, and the thesis that language appeared much earlier than speech in the evolution of the human species, add a further element to the critique of phonocentrism.

Human nonverbal signs include signs that depend on natural languages and signs that, on the contrary, do not depend on natural language and, therefore, transcend the categories of linguistics. These include the signs of “parasitic” languages, such as artificial languages, the signs of “gestural languages”, such as the sign languages of Amerindian (see Sebeok 1979) and Australian aborigines, monastic signs (see Sebeok and Umiker Sebeok 1987), and the language of deaf-mutes; the signs of infants, and the signs of the human body, both in its more culturally dependent manifestations as well as its natural-biological manifestations. The language of deaf-mutes is further proof of the fact that the human being as a semiotic animal is not the speaking animal but the animal that is endowed with language at the level of its primary modeling device. It is not true that dogs only lack speech. Dogs and other non-human animals lack *language*. By contrast, the deaf-mute only lacks speech, as a pathology. This means that other non-verbal systems, such as the gestural, can be grafted onto the primary modeling device of human animals. And thanks to these sign systems the deaf-mute is able to accomplish the same inventive and creative mental functions as any other human animal.

The study of modeling behavior in and across all life forms requires a methodological framework that has been developed in the field of biosemiotics. This methodological framework is *modeling systems theory*, as proposed by Sebeok in his research on the interface between semiotics and biology. Modeling systems theory analyzes semiotic phenomena in terms of modeling processes (cf. Sebeok and Danesi 2000: 1–43).

In the light of semiotics viewed as a modeling systems theory, semiosis – a capacity pertaining to all life forms – may be defined as “the capacity of a species to produce and comprehend the specific types of models it requires for processing and codifying perceptual input in its own way” (*Ibid.*: 5).

The applied study of modeling systems theory is called *systems analysis*, which distinguishes between primary, secondary and tertiary modeling systems.

The primary modeling system is the innate capacity for *simulative* modeling – in other words, it is a system that allows organisms to simulate something in species-specific ways (cf. *Ibid.*: 44–45). Sebeok calls “language” a feature of the species-specific primary modeling system of the species called *Homo*.

The secondary modeling system subtends both “indicational” and “extensional” modeling processes. The nonverbal form of indicational modeling has been documented in various species. Extensional modeling, on the other hand, is a uniquely human capacity because it presupposes *language* (in the primary modeling system), which Sebeok distinguishes from *speech* (as a species-specifically human secondary modeling system; cf. *Ibid.*: 82–95).

The tertiary modeling system subtends highly abstract, symbol-based modeling processes. Tertiary modeling systems are the human cultural systems which the Moscow-Tartu school had mistakenly dubbed “secondary” as a result of conflating “speech” and “language” (cf. *Ibid.*: 120–129).

On the nonverbal component of semiosis is founded the anthropo-semiotic component, which necessarily and additionally implies the species-specific feature of the *Innenwelt* as modeling device called by Sebeok “language”. On language is founded speech of the various verbal languages, and also the various human nonverbal languages. But the common foundation in language does not mean that nonverbal language is similar to verbal language, and that to study it we may use the same categories used in linguistics.

Consequently, Sebeok’s doctrine of signs insists particularly on the autonomy of nonverbal sign systems from the verbal. Such autonomy is demonstrated through his study of human sign systems which, in spite of the predominance of verbal language in the sphere of anthroposemiosis, depend on the verbal only in part.

The historical origin of human verbal and nonverbal signs is in the human species-specific primary modeling device as including, in Sebeok’s terminology, language, which was a primary evolutionary adaptation of hominids. Speech developed out of language, and like language made its appearance as an adaptation – but a *secondary* adaptation or “exaptation” for the sake of communication and much later than language – precisely with *Homo sapiens*, not more than about 300,000 years ago. Only after evolution of the physical and neurological capacity for speech in *Homo*

sapiens was speech possible, i.e., exaptive use of language for vocal communication. Successively, then, speech developed as a double derivative *exaptation*. Speech came to be *exapted* for modeling and to function accordingly as a secondary modeling system; but beyond increasing the capacity for communication, speech also increases the capacity for innovation and for the “play of musement”. Exapted for communication, first in the form of speech and later of script (cf. Posner et al. 1997: I, 443), language enabled human beings to enhance the nonverbal (and pre-verbal) capacity with which they were already endowed.

Concerning the relation between language and speech, Sebeok remarks that it has required a plausible mutual adjustment of the encoding with the decoding capacity. On the one hand, language was “exapted” for communication (first in the form of speech, i.e., for “ear and mouth work” and later of script, and so forth); and, on the other hand, speech was exapted for (secondary) modeling, i.e., for “mind work”. “But”, adds Sebeok (1991: 56), “since absolute mutual comprehension remains a distant goal, the system continues to be fine-tuned and tinkered with still”.

The process of exaptation took several million years to accomplish. The reason seems to be that the adjustment of a species-specific mechanism for encoding language into speech, that is, producing signs vocally, with a matching mechanism for decoding it, that is, receiving and interpreting a stream of incoming verbal/vocal signs (sentences), must have taken that long to fine-tune – a process which is far from complete (since humans continue to have great difficulties in understanding each other’s spoken messages).

The exaptation of modeling to speech (as linguistic communication) implies that speech is forever involved in mind work, in thought. By contrast, its presence in human communication is not frequent. We may communicate without speech; but it is not possible for our thinking, that is, interpreting, without speech.

Body languages belongs to the sphere of *anthroposemiosis*, the object of anthroposemiotics. Following Charles Morris’s and Thomas Sebeok’s terminological specifications, semiotics describes sign behaviour with general reference to the organism, i.e., it identifies semiosis throughout the whole extent of living things, and distinguishes between “signs in human animals” and “signs in non-human animals”, while reserving the term “language” as a special term for the former. In others words, *language is specific to the human as a semiotic animal*, that is, as a living being not only able to use signs – i.e., capable of *semiosis* – but also able to reflect on signs through signs – i.e. capable of *semiotics*. In this acceptance,

language is not verbal language alone: “language” *refers both to verbal and non-verbal human signs*. In this view – that is, from a semiotic, and not a linguistic perspective (i.e. pertaining to linguistics) – *language is not reduced to speech*, but speech is a specification of language. Language is acoustic language as much as the gestural or the tactile, etc. (depending on the kind of sign vehicle that intervenes), which is not necessarily limited to the verbal in a strict sense.

On this subject, the following statement made by Morris seems important (1971 [1946]: 130):

For though animal signs may be interconnected, and interconnected in such a way that animals may be said to infer, there is no evidence that these signs are combined by animals which produce them according to limitations of combinations necessary for the signs to form a language system. Such considerations strongly favor the hypothesis that language – as here defined – is unique to man.

This means that, by comparison with animal signs, human language is characterized by the fact that its signs can be combined to form compound signs. It would seem, therefore, that, in the last analysis, this “capacity for combination” is the most distinctive element. This conception is very close to Sebeok’s, when he states that language (he too distinguishing it from the communicative function) is characterized by *syntax*, that is, the possibility of using a finite number of signs to produce an infinite number of combinations through recourse to given rules.

As we said, body languages include different sign systems. What is common to these sign system is their common foundation in *language* intended as a component of the *specific human modeling device* (see Sebeok 1991 and 2001c). The connection between verbal language and body language largely depends on their common participation in language understood as primary human modeling.

On the original link between gestural language and verbal language, the relation between gesture and verbal intonation and, specifically, the important phenomenon of language creativity called “intonational metaphor” is of particular interest. Bakhtin (1926) observes that an intimate kinship binds the intonational metaphor in real-life speech with the “metaphor of gesticulation”. In fact, the word itself was originally a “linguistic gesture”, a “component of a complex body gesture”, understanding gesture broadly to include facial expression, gesticulation of the face. Intonation and gesture belong to body language; and they

express a living, dynamic relationship with the outside world and social environment.

Thanks to Sebeok, the science that studies the *semiotic animal*, i.e., the human being – the only animal not only capable of using signs (i.e. of semiosis), but also of reflecting on signs through signs, anthroposemiotics – has today freed itself from *two traditional limitations: anthropocentrism and glottocentrism*.

With regard to the first limitation, anthroposemiotics does not coincide with general semiotics, but is only a part of it. Semiotics is far broader than a science that studies signs solely in the sphere of socio-cultural life. Semiotics also studies the signs of unintentional communication (semiology of signification); before this, it was limited by exclusive preference for the signs of intentional communication, Saussure's *sémiologie* (semiology of communication). By contrast, semiotics, following Thomas A. Sebeok and his "global semiotics" paradigm, studies communication not only in culture, but also in the universe of life generally.

With regard to the second limitation (getting free from glottocentrism), critique of glottocentrism in anthroposemiotics must be extended to all those trends in semiotics which refer to linguistics for their sign model. Anthroposemiotics insists on the autonomy of non-verbal sign systems from the verbal, and also studies human sign systems that depend on the verbal only in part, despite the prejudicial claim that verbal language predominates in the sphere of anthroposemiosis.

To get free from the anthropocentric and glottocentric perspective as it has characterized semiotics generally requires taking other sign systems into account beyond those specific to mankind.

Says Sebeok on hybrid jokes (2001b: 116):

The interlaced semiotic transmutations of jokes belonging to this genre depend for their graspable performance on the principle of successivity (or indexicality) superimposed over that of simultaneity (or iconicity). They are therefore a semiotically more complex formation than the run-of-the-mill, orthodox witticisms that brighten our daily lives.

Indexicality, iconicity, and symbolicity are three complementary rather than antagonistic categories. Peirce returned repeatedly to his sign typology. By 1906 he had classified sixty-six different types of signs. However, the most important in all his reflections on signs was a trichotomy formulated in relation to his original typology and presented in an article of 1867,

“On A New List of Categories” (CP 1.545–559). With this trichotomy Peirce identified three types of signs: *icons*, *indexes*, and *symbols*. Sebeok evidenced that all three are present in non-human semiosis as well (for a synthesis of the comparison between the human world and the world of other animals relatively to this typology, see Sebeok 2001a). From the perspective of sign types there is no difference between human and non-human semiosis. In the light of Sebeok’s research, it is now clear that icons, indices, and symbols are present both in languages (which are human) and in non-linguistic semioses.

As Sebeok observes in elaborating on Peirce’s typology, not signs but *sign aspects* are the object of classification. The hybrid character of the sign should now be obvious, with respect to its distinction into “symbol”, “index”, and “icon”. The Peircean conception of the relation between symbol, icon, and index has very often been misunderstood. In fact, these terms were thought to denote three clearly distinguished and different types of sign, each with characteristics so specific as to exclude the other two. Now we know that signs which are exclusively symbols, icons or indices do not exist in the real world. Furthermore (and what most interests us here), in Peirce’s theory, the symbol is a mere abstraction. It is never conceived as existing as a pure symbol, but is always more or less mixed with iconicity and indexicality, or, to say it with Peirce, it is always more or less *degenerate*.

This implies that, more than being signs in their own right, the icon and index represent different levels in *degeneracy of the symbol*. The symbol is not purely a symbol, but almost always takes the characteristics of either the icon or index as well. The symbol may be represented iconically as a body in a state of unstable equilibrium, in which the stabilizing symbolic force is counteracted by iconic and indexical forces. But this image establishes a relation of contrast between symbol, index and icon, when in fact they are not separate or distinct; nor are they in a relation of opposition.

Otherwise, with respect to the symbol, we would have signs that are purely icons or purely indices, and not simultaneously symbols; or symbols with no traces of iconicity or indexicality. Perhaps the image that best accounts for the relation of the symbol to the index and icon is that of a filigreed transparency with uneven traces of iconicity and indexicality, as opposed to pure transparency.

Indexicality is at the core of the symbol, given that the symbol depends on the interpretant as a result of its relation to the object. This is what makes a sign a symbol. This means that Transuasion, which characterizes

the symbol as a transuational sign, is considered in its obsistent aspect (see CP 2.92), and that the index is an obsistent sign. On the other hand, insofar as it is determined by the instances of what it denotes, and being a general type of law, the symbol entails indexicality. In the sign considered as a symbol, identity hinges upon the alterity of the sign which is determined by mediation of the interpretant; so that, insofar as it is a symbol, “a sign is something by knowing which we know something more” (CP 8.332). However, this is so because the sign is not only a symbol, or better, the very fact of being a symbol involves iconicity and indexicality given that thirdness, the mode of existence of the symbol, presupposes firstness and secondness or originality and obsistence, which correspond respectively to the icon and index.

Indexicality is discussed by Peirce to solve the problem of the connection between verbal language and referents in real world. Verbal language is characterized by conventionality and “diagrammatisation”. Diagrammatisation makes verbal language a “sort of algebra”; consequently, it seems to be a sphere apart, separate from its objects. But thanks to indexicality, that is, to an association of contiguity, verbal language is not reducible to an algebraic system. Indexicality enables language to pass from the level of diagrammatisation to the level of application of its diagrams.

Peirce considers the problem of indexicality as part of his quest to solve the problem of how verbal language, characterized by diagrammatisation, which makes it a “sort of algebra”, is able to connect up with its referents. This is only possible, says Peirce, thanks to indexicality, that is to say, association of contiguity (CP 3.419):

It is not the language alone, with its mere associations of similarity, but the language taken in connection with the auditor’s own experiential associations of contiguity which determines for him what house is meant. It is requisite then, in order to show what we are talking or writing about, to put the hearer’s or reader’s mind into real, active connection with the concatenation of experience or of fiction with which we are dealing, and, further to draw his attention to, and identify, a certain number of particular points in such concatenation.

The function of indexicality is to make language pass from the level of diagrammatisation to the level of application of its diagrams. The recurrent distinction between subjects and predicates of propositions implies the distinction, says Peirce, between the indicative part of discourse and what it affirms, questions, or commands about it.

This excursus on semiotics should be sufficient to explain Sebeok's interest in hybrid jokes.

In his article mentioned at the beginning of this paper, which was originally published in Italian, Sebeok's examples of hybrid jokes are all translated into drawings by Luciano Ponzio, and are accompanied by the following captions: "The Danish Photographer", "Les Baguettes", "Jesus Christ on the Cross", "The Dead Cat", "Short Necks". These drawings were produced on the basis of a set of fun photographs sent to Luciano Ponzio by Sebeok, picturing Jean Umiker-Sebeok, Erica L. Sebeok, and himself as they modeled the gestures.

References

- Bakhtin, Mikhail M.
 1926 "Discourse in life and discourse in poetry", Bakhtin School papers, ed. by Ann Shukman, *Russian Poetics in Translation* 10 (1983).
- Cobley, Paul, Editor
 2001 *The Routledge Companion to Semiotics and Linguistics* (London and New York: Routledge).
- Deely, John, Susan Petrilli, and Augusto Ponzio
 2005 *The Semiotic Animal* (Ottawa, Canada: Legas).
- Morris, Charles
 1946 *Signs, Language, and Behavior* (New York: Prentice Hall).
- Morris, Charles
 1971 *Writings on the General Theory of Signs*, ed. T. A. Sebeok (The Hague-Paris: Mouton).
- Peirce, Charles Sanders
 i.1866–1913 *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction "Membra Fictae Disjecta – A Disordered Array of Severed Parts" (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Peirce, Charles Sanders
 1867 "On a New List of Categories", CP 1.545–549.
- Petrilli, Susan, Editor
 1999–2000 *La traduzione. Athanor. Semiotica, filosofia, arte, letteratura*, X, 2; intro 9–21.

- Ponzio, Augusto
 1990 *Man as a Sign*, edited, introduced, and translated by Susan Petrilli (Berlin: Mouton de Gruyter).
- Ponzio, Augusto
 1993 *Signs, Dialogue, and Ideology*, edited and translated Susan Petrilli (Amsterdam: John Benjamins).
- Ponzio, Augusto
 2004 “Modeling, Communication and Dialogism”, *The American Journal of Semiotics* (on the theme “Semiotics and Philosophy: Synchronic and Diachronic Perspectives”) 20.1–4, 157–178.
- Ponzio, Augusto
 2006 *The Dialogic Nature of Sign*, English trans. by Susan Petrilli (Ottawa, Canada: Legas).
- Ponzio, Augusto, and Susan Petrilli
 1998 Special Issue of *Semiotische Berichte* on “Signs of Research on Signs” (Österreichischen Gesellschaft für Semiotik, Special Issue) Jg. 22, 3/4.
- Ponzio, Augusto, and Susan Petrilli
 2001 *Sebeok and the Signs of Life* (London: Icon Books).
- Ponzio, Augusto, and Susan Petrilli
 2002 *I segni e la vita. La semiotica globale di Thomas A. Sebeok* (Milan: Spirali).
- Ponzio, Augusto, and Susan Petrilli
 2005 *Semiotics Unbounded* (Toronto: Toronto University Press).
- Ponzio, Luciano
 2000 *Icona e raffigurazione. Bachtin, Malevic, Chagall* (Bari: Adriatica).
- Ponzio, Luciano
 2002 *Visioni del testo* (Bari: Graphis).
- Ponzio, Luciano
 2004 *Lo squarcio di Kazimir Malevic* (Milano: Spirali).
- Posner, Roland, Klaus Robering, and Thomas A. Sebeok, Editors
 1997–2004 *Semiotik|Semiotics. A Handbook on the Sign-Theoretic Foundations of Nature and Culture* (Berlin: Walter de Gruyter), 3 Vols.
- Sebeok, Thomas A.
 1979 *The Sign & Its Masters* (Austin, TX: The University of Texas Press). Corrected 2nd ed., with a new Foreword by the author and Preface “A Global Enterprise” by J. Deely (Lanham, MD: University Press of America, 1989). Italian translation and introduction by Susan Petrilli, *Il segno e i suoi maestri* (Bari: Adriatica, 1985).
- Sebeok, Thomas A.
 1986 *I Think I Am a Verb* (New York and London: Plenum Press). Italian trans. with Introduction by Susan Petrilli, *Penso di essere un verbo* (Palermo: Sellerio, 1990).

- Sebeok, Thomas A.
1991 *A Sign Is Just a Sign* (Bloomington, IN: Indiana University Press). Italian trans. with Introduction by Susan Petrilli, *A Sign is just a sign. La semiotica globale* (Milan: Spirali, 1998).
- Sebeok, Thomas A.
1999–2000 “Trasmutazioni intersemiotiche: un genere di barzellette ibride”, disegnatte da Luciano Ponzio, *La traduzione. Athanor. Semiotica, filosofia, arte, letteratura*, X, 2.
- Sebeok, Thomas A.
2001a *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
2001b “Intersemiotic Transmutations: A Genre of Hybrid Jokes”, in T. A. Sebeok 2001a: 115–120.
- Sebeok, Thomas A.
2001c “Nonverbal communication”, in Cobley ed. 2001: 14–27.
- Sebeok, Thomas A., and Marcel Danesi
2000 *The Forms of Meanings. Modeling Systems Theory and Semiotic Analysis* (Berlin: Mouton de Gruyter).
- Sebeok, Thomas A., Susan Petrilli, and Augusto Ponzio
2001 *Semiotica dell'io* (Rome: Meltemi).
- Umiker-Sebeok, Jean and Thomas A. Sebeok
1987 *Monastic Sign Languages* (Berlin: Mouton de Gruyter).

Chapter 17

Thomas A. Sebeok, A portrait of a Finnougrian semiotician

Eero Tarasti

My purpose is to give a profile of one of the most remarkable semioticians of the twentieth century, Thomas A. Sebeok. He has presented himself in almost all contexts as an American scholar, so to attach the title “Finnougrian” to his name calls for some explanation. The surveys of John Deely (1995), Susan Petrilli (1991), and Yo Young Switzer, Virginia Fry, and Larry Miller (1990) on his life and work focus on the international aspects of his career. Surprisingly, Sebeok’s own autobiographical essay, “Into the Rose-Garden”, his farewell lecture at Indiana University on 22 March 1991, ignores as well this Finno-Ugric background. Yet Sebeok’s last book, *Global Semiotics* (2001), contains a chapter titled “My Short Happy Life in Finno-Ugric Studies”.

It is noteworthy that after his seventieth birthday he started to spend longer periods again in Budapest, and also in Finland. He was proud of the fact that on streets of Budapest people did not notice an accent in his Hungarian. Likewise, he passively mastered Finnish, and would have spoken it if he had had opportunities. However, we are glad that he was a person who documented his own activities in detail in the booklet *Thomas A. Sebeok Bibliography 1942–1995* (Deely ed. 1995a). Few scientists of the 20th century have had so manifold activities that the mere list of publications, honours, visits, etc., is a book of 130 pages.

The rise of semiotics in the latter half of 20th century into one of the most focal paradigms of science has been achieved not only by the theoretical reflections of various schools and scholars, but also as the consequence of indefatigable practical work (“pragmatism” in the true sense of the word) of some key figures. How were the various institutions supporting semiotics created? How was the IASS, the International Association of Semiotic Studies, created? How were such important publishing series as *Approaches to Semiotics*, *Semiotica*, *The American Journal of Semiotics*, etc. launched? Who made international publishers, like Mouton de Gruyter, Indiana University Press, Toronto University Press, etc.,

interested in semiotics? Who was founder of the SSA, Semiotic Society of America? Who, in a tireless and enthusiastic manner, has spread the message of semiotics to all parts of the world?

At the center of an answer to all these and related questions lies inexhaustible energy of one person above all. Thomas A. Sebeok has been behind all these phenomena. Charles S. Peirce, the earliest and in fact first representative of this same Anglo-Saxon tradition of semiotics to which Sebeok belonged, was interested in 1884 in the “Study of Great Men” (see Peirce 1884–1886). He had investigated hundreds of notorious men in the history of mankind, using a list of forty questions. The questions covered practically everything about these persons — their background, environment, character, relationship of work and genius (e.g., How he was appreciated by his contemporaries? Which impressions he arose in his closest environment?, etc.). Peirce was interested in their physical attributes (height, weight, digestion, skin, strength, beauty, possible left-handedness etc.), their character (questions about their eating habits, musical interests, quality of memory, type of imagination, patience, irascibility, will to power, sociability, emotion), the relationship between work and genius (how often and for what lengths of time he worked, how intensively? At which time of the day? Did he need a stimulus for his work? Did he work alone? Did he work overtime to complete projects?) (Peirce’s questions reveal, naturally, much about his own psychology and nature).

In his comparison of great men, he used four categories: first class geniuses, so far accepted, suspect, and so far rejected. Only one person to be recognized as a semiotician had entered his list of greats, namely, John Locke. I am sure that had Sebeok lived one hundred years earlier, he would have been the first person in the first category of Peirce’s list.

So suppose that we now apply the questions and categories of Peirce’s investigation to the case of Thomas A. Sebeok? At least some questions are relevant. Some of the answers we know from Sebeok’s own writings. Some answers I add on the basis of my knowledge of Tom covering more than twenty years. (He is the most often cited and mentioned semiotician in my own *Merkkien kronikka. Chronicle of Signs*, Tarasti 1991, which consists of membership letters of the Semiotic Society of Finland).

Thomas Albert Sebeok was born in Budapest on 11 November 1920. His father, anticipating the outbreak of the World War, had gone to the United States, where he urged his son (then at college in England) to join him, and where he became economic advisor to the senator (later Democrat candidate for President) Hubert Humphrey. In his childhood Thomas had studied Latin and German as his major foreign languages,

and also Italian. Summers the family spent at their villa on the Adriatic Sea, close to Trieste. He took his father's advice and migrated in 1937 to the United States. His university studies went quickly. He obtained his B.A. at the University of Chicago in 1941, his M.A. and Ph.D. at Princeton in 1945. But as we know, since 1943 he held a professorial position at the Bloomington campus of Indiana University, where he spent his whole professorial life and created the legendary Research Center for Language and Semiotic Studies.

(As an important background figure for the growth of semiotics at Indiana University, I want to mention its great promoter for many decades, the Chancellor, Herman B. Wells. He told about all the phases of his university since its creation in his unusually fascinating 1980 autobiography *Being Lucky*. Wells mentions there (p. 256) that "Sebeok and his colleagues introduced such exotic newcomers as Uralic and Oriental Languages". I remember personally Wells's eloquent speech at a dinner in 1979 celebrating the American-Polish symposium on logics.)

Sebeok's earliest publications were all in Finno-Ugric studies. His very first article was entitled "Analysis of the Vocalic System of a Given Language Illustrated by Hungarian", published in *Quarterly Journal of Speech* in 1942. In 1944 he published among other essays "The Finno-Ugric Language Family", "The Imperative in Spoken Finnish", "Phonemics and Orthography in Finnish"; in 1945 he published "Finnish Adverbial Noun Forms" and "Finno-Ugric and Languages of India". In the same year, he prepared for the US army a book on *Spoken Hungarian*, and in 1947 *Spoken Finnish* (New York: Henry Holt and Company), which contained twenty five vinyl records illustrating the correct pronunciation. The American voice was Sebeok, the voice was that of the Finnish Ambassador in Washington (by the way, Sebeok's favourite Finnish word was "lämpimämpi" – warmer – because of its phonetic qualities). Without visits to Finland, he would not have been able to write that book. So, unintentionally, his book is at the same time a semiotics of Finnish culture. The American, "Jim", meets at Turku railway station his Finnish host, "Paavo" (or "Jussi"), who invites him to visit his farm in the countryside. Along the way they admire the architecture in Helsinki, the Eliel Saarinen railway station, get familiar with Finnish cooking of meat balls and onion sauce. The fictive Finns of Sebeok tend to drink a lot, but still belong to the category of "regular guys", as he says.

In 1947 Sebeok did field work in Lapland. This stint not only hardened his body by swimming in the river Teno, it was also dangerous. Every now and then explosions were heard in the forests, when a reindeer had stepped

on a mine. His Lappish informants would comment on such occasions, with their bass voice (which Sebeok could correctly imitate): “Sota on sotaa” (“War is war”). Later he continued his ethnological work with the studies on the Mari people at the river Volga in the USSR. He made detailed notes on the region, maps, etc. The reliability of his anthropological work is well verified in the anecdote he told about how, in order to get more information later, he visited the Pentagon and its top secret information center. After long waits and inspections at checkgates, he was finally shown a dossier of information on Cheremis people. The first item in the dossier were his own maps of the area!

Nevertheless, in the years 1949–1953 Sebeok was mainly focused on studies of the Cheremis people, which was the topic of his Ph.D. thesis entitled *Studies in Cheremis Folklore*. This doctoral thesis was published in 1952 (by Indiana University Publications), and in 1955 he published there also as a volume of “Studies in Cheremis Folklore” his book entitled *The Supernatural*. At Indiana University he was actively involved in founding the Department of Uralic and Altaic studies, and when the Department of linguistics was established there he joined its staff. One of his informants in at the university in Bloomington was the Finnish cellist, Lennart Zwegberg, who had been teaching for years there at the School of Music.

But as we know, at the side of his career as a finnougric scholar developed his alter ego, which later became his main field: semiotics. In fact, as early as 1936 he had met Charles Morris at the University of Chicago, and followed Morris’s courses in semiotics together with the mathematician, Martin Gardner, and musicologist, Leonard B. Meyer. This happened to be the very first seminar on semiotics to be held in the United States. Morris did not repeat it more than a couple of times before he moved to Florida, got familiar with behavioristic psychology, and largely gave up his earlier interest in semiotics.

However, it was in 1936, with the book *The Meaning of Meaning* by Ogden and Richards, that Sebeok started his permanent contact with the doctrine of signs; and via this work, his intellectual contact with two great men, Charles Peirce and Bronisław Malinowski.

In the 1940s he met Roman Jakobson and Claude Lévi-Strauss, along with Jacques Maritain, who were teaching at the New School for Social research in New York. Sebeok was proud that Jakobson had called him “his first American student”. Sebeok himself has reported on these meetings in his autobiographic Presidential Address to the Semiotic Society of America, “Vital Signs” (1991). Both Jakobson and Lévi-Strauss visited

Bloomington, where Sebeok organized symposia on the topics of *Style in Language* and *Myth*. In this last volume Lévi-Strauss presented his famous analysis of the myth of Oedipus (1955).

In 1956 Herman B. Wells founded an institute called the Research Center for Anthropology, Folklore, and Linguistics. Its first Director was Stith Thompson, but when Thompson was nominated Director of Graduate School, the position was offered to and accepted by Sebeok, who loved liked interdisciplinary activities. Later, this institute became the renowned RCLSS or Research Center for Language and Semiotics Studies, the main stage for innumerable symposia, international exchanges, and publications. I remember meeting there with Umberto Eco, the both of us staying at the Indiana Memorial Union for the occasion of an annual meeting of the Semiotic Society of America. Many semioticians from all over the world have been able to enjoy the hospitality of Sebeok's Research Center as its visiting scholars.

Unfortunately after Sebeok's retirement the activities of the center shrank, and then disappeared. Sebeok never established semiotics in Bloomington as a discipline training Masters and Doctors of semiotics, for a very pragmatic reason: he could not see at that time many options for a job for such professional semioticians. There was, however, a study program of semiotics, run also by Tom's wife, Jean Umiker-Sebeok. The program consisted of studies and courses all over the campus in which semiotics figured either as a major or minor component.

In the 1960s, Sebeok's cooperation with the Indiana University Press intensified. He established there a series, "Advances in Semiotics", under the strong favor of the Press Director, John Gallman. At that same time he was actively creating the international movement of semiotics in the context of the IASS/AIS, the International Association for Semiotic Studies, which had its first world congress in Milan in 1974, and the second one in Milan in 1979. From this time dates his friendship with Umberto Eco, which lead to the founding of *Semiotica* and the monograph series "Advances in Semiotics" at Mouton de Gruyter in Berlin. His role in this international expansion of semiotics was nothing less than seminal.

Sebeok's activities were based in abundant travels. This was possible because he was not bound with any fixed teaching schedules at his own university. The administration he flummoxed by saying that when he had to go to a meeting of committee A, unfortunately he had to be at the same time in the meeting of committee B, and vice versa. Travelling became his own art. It became common knowledge that he needed to know half a

year in advance the name and telephone of the hotel he was to stay in, the reservations of flights, etc. His seat in the aircraft was always 6A. (Once his wife Jean sighed: “I am tired of getting to the airport four hours before the flight”). Remembering Peirce’s list of characters of great men, these anecdotes may be symptomatic. No fault was worse in Sebeok’s universe than to be late, or to show negligence of preciseness. The great breadth of his scholarly output, despite his constant traveling, is explained by the fact that he needed only five hours sleep. He woke up every morning at 04:00 to write in the silent morning moments.

As a linguist, he always considered himself to be a student of Roman Jakobson. Jakobson too turned his own attention to semiotics, which to his mind had not to be psychologized. The relationship of reference of sign, “renvoi”, was a purely semiotic event. Jakobson also focused attention on the hidden iconicity of language – for instance, in the example of Caesar, who definitely said “Veni, vidi, vici”, and not “Vici, vidi, veni”, since language followed the iconic order in its syntagma. Another example from Jakobson was “horrible Horace” (not “terrible Horace”), and the comparative forms “big, bigger, biggest” in which the length of the word reveals the shift from smaller to larger. The 70th anniversary Festschrift of Sebeok dealt with just this problem.

Sebeok’s view of language was singular, in that he held that communication was not its primary function. Originally, he held, language with its syntax emerged as a kind of model of reality. (He put this in a TV interview in Imatra in 1998, in his answer to question “What Is Semiotics?”. “Semiotics”, he said, “does not study the reality but our illusions about reality”.) Only later, by ‘exaptation’, does language become a tool whereby speakers communicate with each other. This is proved by the fact that non-verbal communication systems function efficiently even without verbal language. Together with his wife, Sebeok has published extensive anthologies on *Speech Surrogates. Drum and Whistle Systems* (1976) and *Monastic Sign Languages* (1987). The first of these investigates the drum and whistle signals in languages of the aboriginals, and the second the communication in monasteries where speaking is forbidden.

In the early 1960s, Sebeok got interested in the sign systems of animals, and launched a new discipline, zoosemiotics (which, according to Dario Martinelli, should be spelled rather zoösemiotics: see Martinelli 2006). Sebeok believed that animals do have art and an aesthetic sense (he wrote a major essay on “Prefigurements of Art”.) He also studied the intelligence of animals, in his famous study on the phenomenon of “der kluge Hans”, a horse in Berlin at the time of Bismarck of which it was claimed that

the horse could count. In *The American Journal of Semiotics*, Sebeok published a fictive dialogue with Maurice Maeterlinck entitled “Dialogue about Signs with a Nobel Laureate”. His partner in dialogue was Sebeok’s own alter ego, Sebastian the Sorcerer. (By the way, in my own novel, *Le secret du professeur*, Amfortas, the narrator, is also called Sebastian, but Sebeok appears there under pseudonym “Thomas Titulus”, as a reference to Titurel in Wagner’s Parsifal: see Tarasti 2000). The whole idea of Sebeok’s fictive short story is that Maeterlinck is seen a kind of zoo-semiotician who has published a book about the intelligence of plants, and an essay “La vie des abeilles”. According to the anecdote by Sebeok, the film producer Sam Goldwyn commissioned from Maeterlinck a manuscript for a new Hollywood movie, for which he was paid that highest honorarium in the history of honoraria. The writer was brought by a private train to the West Coast, but there it was revealed that in the main role of the film figured: a bee.

The later output of Sebeok from the 1980s focused ever more strongly on the interpretation of nature as a semiotic process – as a universe which was, to quote Peirce, “perfused by signs”. It was natural to move from animals to biosemiotics in a broader sense, and medical semiotics as well. The term “vital signs” meant precisely the signs which a physician observes in his patient when he encounters him/her. At the end, Sebeok’s view culminates in the semiotic interpretation of the biological phenomenon of life itself as a whole. Naturally here Sebeok identifies the founding figure of the Baltic-Estonian biologist, Jakob von Uexküll, as a precursor of the science (a “cryptosemiotician”), and sponsored the translation of Uexküll’s ideas into “semiotics” by his son the German scholar of psychosomatics Thure von Uexküll.

The central notion of the Uexküll’s was the Umwelt, which meant the life-world of an organism, a kind of exogenic universe of signs. The organism is connected with its Umwelt by the two activities of Merken and Wirken, as Jakob said in his *Bedeutungslehre* of 1946. This was also, for Sebeok, the foundation of what he called “the semiotic self”. To his mind, semiotics starts and ends in biology. But semiotics was not reduced to biology – rather was biology shown to be based on “semiosis”.

Sebeok also wrote about “ecumenia” in semiotics. Although he doubtless belonged to the Anglo-Saxon tradition of semiotics in the line of Locke-Peirce-Morris, he had many contacts with European semiotics. Together with Umberto Eco he published a collection entitled *The Sign of Three*, in which they pondered the abductive reasonings by Sherlock Holmes. He had also much to say about the Tartu-Moscow school and

its idea of “modeling systems”, when Henri Broms organized the commemorative symposium on that school in Imatra in 1986, and of course during his visit to Tallinn and Tartu later. Sebeok was often seen visitor at Bari University, Italy, at its Department of Language, invited by Augusto Ponzio and Susan Petrilli. Moreover, he had close contacts in Eastern Europe, in Hungary, in Bulgaria (which he visited invited by Maria Popova and Bogdan Bogdanov at New Bulgarian University in Sofia). He did not hide his antipathies, especially against French semiotics (“semiology”, really) and particularly its Paris school. There are many anecdotes about this.

Sebeok’s impact on and devotion to the development of semiotics in Finland was deep. It was his idea to create the International Semiotics Institute, to promote the information distribution on all activities in semiotics as well as international student mobility in semiotics. A collegium of forty eminent semioticians had been gathered in Imatra under the direction of Sebeok and Paul Bouissac, when Sebeok got the idea this institute could be settled to Finland, particularly to Imatra. So the ISI was created there in 1988. The institute did not become what Sebeok had planned, namely, the place to which the so-called “regional centers” would systematically send information. But soon the ISI took a role as a center of international conventions in semiotics, and so assumed an independent role with functions that went far beyond Sebeokian dreams. The king idea of Sebeok was to have also the world congress of semiotics of the IASS in Finland, an idea which became reality only in the summer of 2007, five and a half years after Tom’s passing away.

I personally met Sebeok for the first time in 1979, in Budapest at a pre-symposium to the Vienna world congress, where Vilmos Voigt introduced us. My first impression was of a gentleman who was physically something between Sigmund Freud and the emperor Franz Joseph of Austria-Hungary. I have always imagined him sitting not only at the Up-Town-Café of Bloomington among the “Hoosiers”, but at a nostalgic Viennese cafeteria (albeit one may also see in him a tinge of Ernest Hemingway). Later, Sebeok invited me to Bloomington many times, for the first time in 1979 for a symposium, but later always also to Annual Meetings of the Semiotic Society of America (SSA) – which provided me with a model on how to organize the corresponding meetings of the Finnish society. Such congresses were held in Buffalo, New York, Lubbock, Texas, and San Francisco, California. His cosy department in Bloomington functioned still in the 1980s at an old wooden house on Dunn Street in Bloomington, close to the center of the campus.

Of Sebeok's many visits to Finland, which became practically annual until the end of his life, I remember particularly one in the summer of 1992. It was exceptionally hot, and Sebeok arrived with his daughter Jessica from Umberto Eco's castle in Italy to Finland to a still worse heat. We decided to drive by car from Helsinki to Mikkeli to our summer house, 235 kilometers from the South towards the North, and continue then, after a rest, to Imatra, to the East, to our symposium.

Yet to reach our summer house one had to row by a wooden boat. Like most such boats, ours had some water inside, and we were surrounded and attacked by Finnish mosquitoes. "This reminds me of Paraguay" said Tom. On the other side of the lake we found out that the salmon which we had bought at Helsinki market place in the morning had changed its colour to grey and become inedible. The fish was not as durable as the one in Umberto Eco's story "How to Travel With A Salmon". Also the liquid gas ran out, and we had to set fire to logs in the fireplace, for in that archaic house there was no electricity. But as usual, the fireplace, which had not been much used, tends to fill the house with smoke. To eat on the occasion we had only eggs to prepare an omelette. On resuming our journey we had planned to pass by the famous prehistoric rock paintings at Ristiina, close to Mikkeli, but that would have required a long walk in the forest; so those exciting signs remained without a semiotic interpretation. The Sebeoks were glad and relieved when finally the towers of the art nouveau castle of Imatra became visible. I want to tell this story, to emphasize that, in spite of the major theme of this short essay – the "Finno-Ugric" aspect of Thomas A. Sebeok – he was or had become also completely American, during his long and happy life in Bloomington!

References

Deely, John, Editor

1995a

Thomas A. Sebeok Bibliography 1942–1995 (fascicle 15 in the *Arcada Bibliographica Virorum Eruditorum* of Gyula Décsy; Bloomington: Eurolingua, 1995).

Unfortunately, the series editor chose not to take into account the only copy of all the final corrections that were sent for the final production from Mexico (including the omission of the "Studies in Semiotics" series of at least nine volumes that Sebeok edited for The Peter De Ridder Press). Since Décsy possessed the only copy of these corrections, they are probably lost forever.

- Deely, John, Editor
 1995b “Quondam Magician, Possible Martian, Semiotician: Thomas Albert Sebeok”, in *Ensaaios em Homagem a Thomas A. Sebeok*, quadruple Special Issue of *Cruzeiro Semiótico* (Associação Portuguesa de Semiótica; revista semestral) 22/25, ed. Norma Tasca (Porto, Portugal: Fundação Eng. António de Almeida), 17–26.
- Deely, John, Editor
 2005 “Thomas Albert Sebeok (1920–2001)”, in *The Dictionary of Modern American Philosophers* (Bristol, UK: Thoemmes Press), Vol. 4, 2183–2188.
- Martinelli, Dario
 2006 *Zoomusicology* (Imatra, ISI: Acta Semiotica Fennica).
- Peirce, Charles Sanders
 1884–1886 Volume 5 of the *Writings of Charles S. Peirce: A Chronological Edition*, initiated as the Peirce Edition Project at Indiana University-Purdue University/Indianapolis by Edward C. Moore under the general editorship of Max H. Fisch, succeeded first by Christian Kloesel in late 1984, and then in late 1993 by Nathan Houser (Bloomington: Indiana University Press, 1993).
- Petrilli, Susan
 1991 “‘From Peirce (via Morris and Jakobson) to Sebeok’, interview with Thomas A. Sebeok”, in *American Signatures. Semiotic Inquiry and Method*, ed. Iris Smith (Norman, OK: London: University of Oklahoma Press), 95–105.
- Sebeok, Thomas A.
 1978 *The Sign and Its Masters* (Austin, TX: University of Texas Press).
- Sebeok, Thomas A.
 1982a “Dialogue about Signs with a Nobel Laureate”, *The American Journal of Semiotics* 1.3, 35–57.
- Sebeok, Thomas A.
 1982b “Taiteen esimuotoja: eläinsemioottinen tarkastelu”, *Synteesi* 2–4/82, s. 5–10.
- Sebeok, Thomas A.
 1990 *Essays in Zoosemiotics* (Monograph Series of the Toronto Semiotic Circle; Toronto: Victoria College).
- Sebeok, Thomas A.
 1991a “Vital Signs”, in *American Signatures. Semiotic Inquiry and Method* (Norman, OK: University of Oklahoma Press), 107–132. Presidential Address delivered October 12 to the ninth Annual Meeting of the Semiotic Society of America, Bloomington, Indiana, October 11–14, and first printed in *The American Journal of Semiotics* 3.3 (1985), 1–27.

- Sebeok, Thomas A.
1991b *A Sign is Just A Sign* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
2001 *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A., Editor
1977 *A Perfusion of Signs* (Bloomington, IN: Indiana University Press).
- Switzer, Yo Young, Virginia H. Fry, and Larry D. Miller
1990 "Semiotic and Communication: A Dialogue with Thomas A. Sebeok", *The Southern Communication Journal* 55 (Summer), 388–401.
- Tarasti, Eero
1991 *Merkkien kronikka. Suomen Semiotiikan Seuran jäsentiedotteet v. 1979–1991* (Imatra: Imatran Kansainvälisen Semiotiikka-Instituutin julkaisu nr. 1).
- Uexküll, Jakob von
1946 *Bedeutungslehre* (Berlin).
- Umiker-Sebeok, Jean
2003 "Thomas A. Sebeok. A bibliography of his writings", in *Semiotica* 147–1/4 (2003), 11–73.
- Wells, Herman B.
1980 *Being Lucky. Reminiscences & Reflections* (Bloomington, IN: Indiana University Press).

Chapter 18

Sebők Tamás – Identity and integrity

Vilmos Voigt

Most of my readers would know (or guess) that the first words in my title represent the original Hungarian form of the name of Thomas A. Sebeok. In *eo* /pronounce: *io*/ there occurs his ingenious inverse of the “Latin letters” equivalent of the Hungarian phoneme /*ö*/ *oe* (in its common orthography). *Sebők* is a Hungarian derivative of *Sebestyén* (‘Sebastian’). The first Hungarian data for the European name date back to the Middle Ages, and the Greek–Latin *Sebastian* means ‘man from Sebaste/Sebasta’, a name for some towns in the Antiquity. (Cf. Roman Jakobson = ‘from Rome’ + family name.) The Middle Initial “A.” we understand as abbreviation for Albert. But in Hungarian the middle initial does not exist at all. Tom (the common diminutive form of Thomas) sounds to us very “English”. (In Hungarian it might be *Tomí*.) *Tom* in Hungary is very rarely used, and, if yes, then only for cats. The *feline* use of the male first name (“Christian name” in Hungarian) is also a British invention: the famous figure *Tom the Cat* was very popular in the literature of England from about 1760.

Tom Sebeok, of, course, knew well those associations. He was a well trained phonologist. He had a good sense for puns. Once we were talking about it and he added: “Look, *Vili* (=diminutive form of my first name in Hungarian), from the zoosemiotic point of view I am just satisfied with my “animal” name. But why exactly a cat? For instance, I am unable to purr. Why not a dolphin?” Of course, he was right, especially because the conversation took place in San Diego, at the time (1973) when people wanted to elect the famous dolphin in the zoo, *Shamu*, for the mayor’s post, “he being the most clever citizen in the town”.

Sebők is a common family name in Hungary. Thus, without a thorough study, it is hazardous to connect all “Seböks” with Sebeok. For example, in show business in Hungary there regularly appears an “ecological rock guru”, Seboek (!), who used to chain himself inside a cage in the Budapest zoo – in order to protect the “green world”. (By the way, he is clever and definitely a learned person, who knows many of Tom’s works.) The famous pianist, György Sebők (born 1922), was a professor in the Music Academy in Budapest, and then he moved to

Paris, and finally from 1962 was professor of music at Indiana University (Bloomington). He was not a relative of Tom, but they knew each other personally, and it was one of Tom's favourite stories to tell how often he was asked by long distance calls to give a concert in various American cities. He usually "promised" it, but immediately afterwards he told the inquirer: "I am not the *Gyuri* (Hungarian diminutive of György), but a linguist, Tom". I informed Tom that there is also a well known dramatic soprano, Sára Sebeök (1886–1952), graduated in Budapest and Vienna, a famous singer in Vienna, Frankfurt, and Budapest opera houses. Her *Norma* was a legendary success. Tom was much amused by the connection, telling how, like Virginia Woolf's *Orlando*, he could live through centuries with shifts of sex.

Some Hungarian colleagues have tried to connect him with the famous Hungarian writer of nice, illustrated children's books, Zsigmond Sebök (1861–1916), whose "Mackó úr" and "Dörmögő Dömötör" novels tell about adventures of a family of bears, travelling first in Hungary, but then they visit also New York and Niagara Falls. The witty books belong to common knowledge among Hungarians, even people, who have not read the books know some famous quotations from them, often in verses.

Once I asked Tom about that possible family contact, but he gave a short and negative answer.

Sebök left Hungary (first for England, then for the United States as early as 1936) as a young man, and earned his university degrees in the USA. Nevertheless, he never concealed or minimized his Hungarian identity. He spoke our language as a native Hungarian intellectual – but most of his publications in Hungarian are translations from his already published texts. He was afraid of losing the high stylistic qualities of his English. He was delivering "official" lectures in Hungarian – from type-written translations. But in the discussion afterwards he would freely use highbrow Hungarian. As a research fellow of College Budapest in the 1990s, he held a once-a-week meeting about the "history of semiotics". The free conversation was conducted in Hungarian. Sebeök was often quoting English verses, texts from films, etc., but (according to my memory) he never quoted a Hungarian poem or a Hungarian film. His taste in music was very international, reaching from Italian opera or Vienna classics to jazz or gospels. But I do not remember any piece of Hungarian music that he particularly favoured.

In Hungary his "first" foreign language was Italian. As a schoolboy in Budapest he won a prize for it from Mussolini's Italy. Very many years

later, as the world-famous linguist, at a reception he was greeted by a noted celebrity in linguistics in Italy. “I remember you” – said Sebeok to him: “You gave me the award for my knowledge in Italian.” “I might remember you too” – said his host: “but now it is better if you forget about it” he whispered. (Later, his “foreign” language was French, and not German, which means a rarity both in Hungary and in the United States. His Russian was less than minimal – an enigmatic handicap for a Finno-Ugrist!)

Tom’s father was a businessman, who realized sooner or later that Tom would not follow his path. So he was allowed to start his university studies in the humanities. Tom’s numerous autobiographical speeches invariably emphasize the fact that he wanted to be a biologist. But already at the University of Chicago he turned towards linguistics, in the broad sense of the term (“general linguistics”).

It was obvious that he was starting as a Hungarian linguist (and as a Finno-Ugrist). Five of the ten early papers by Sebeok are about the Hungarian language. He added Finnish and later Cheremis to that list, not without an influence from the practical interest of the US Army in the Second World War. Two of his early books, *Spoken Hungarian* and *Spoken Finnish*, served as “War Department Education Material” issues. His Cheremis improved when, after the war, he came back to Budapest, studying the library and notes of professor Ödön Beke, the foremost Cheremis linguist. Beke published Sebeok’s first paper in Hungarian (1946). His strictly Finno-Ugric interest lasted until about 1965, but by then he was already a well-accepted expert in psycholinguistics and animal communication – and he was the rising star on the horizon of the newly born movement toward “semiotics”. Still, he remained the editor of the Bloomington-based *Uralic and Altaic Series* of books (1960–1969, hundred of volumes, the majority with Hungarian affiliations). Thus Sebeok was helping in publishing Hungarian dissertations and reprints, and he was generously sending free copies to the specialists. (Some of such “bonzes” have immediately sold the books to second hand bookshops in Budapest – thus young philologists could buy them regularly. . . . In another conversation I told him about this phenomenon, and his answer was again a witty one: “that is the reason why I am not inscribing in the books the name of the person to whom I gave it. Books with a handwritten dedication may be more valuable . . .”.)

My first Sebeok book was *Style in Language* (1960). As a third-year university student I wrote to him, asking for the book. It was sent to me by return mail. (See my review in *Nyelvtudományi Közlemények* LXV /1963/ 238–241.)

It is little known that after the Hungarian revolution in October 1956 he came to Vienna and was working in the selection committee of Hungarian immigrants to be accepted into the United States. That is why it was a courageous fact that he repeatedly visited Hungary, as early as from the 1960s. His visits were not long, often lasting for only a couple of days, and filling in the gaps of other visits in different countries. He met then in Budapest his “old” and “new” colleagues, participated in conferences, and had some lectures. It was always very original and inspiring – but too modern, even for the majority of his audience. Perhaps they have mongered the rumor that Sebeok comes to Europe every year in order to buy a cheap *Volkswagen* car, and then sell it for a high price in Bloomington. . . .

Sebeok’s “first lieutenant” in Hungary was György Szépe, the then-influential young linguist. He has promised to publish Sebeok’s works in Hungarian. Over the past thirty years there have been several meetings about the plan, even in the flat of the (then) director of the Hungarian Academy Press, György Hazai – all proposals without results. Two small books (*Prefigurements of Art* and the Sherlock Holmes book: *You know my method*) came out in Hungarian, and a dozen of his papers – but quite independently of the above mentioned “plans”. After a while Tom did not ask me any more about his “coming soon in Hungarian” books. It was a pity of never fulfilling the promises!

But I can tell at least one reason for the failure: there were only a few persons who could translate a true Sebeok-text into the same perfect Hungarian. The excellent psycholinguist (later visiting professor in Bloomington), Csaba Pléh was the translator of the *Prefigurements*. He did an excellent job. I was asked by our Academy Press to “check” the translation. In that summer I spent a month in Greece with my wife. Every day I was not correcting but polishing the translation. I found four mistakes, and in three cases Mr. Pléh agreed with me, but in the last case he did not allow me to change his sentence. On my bookshelf I have the copy of the Hungarian book, signed by Tom and Pléh on 27 October 1984. We asked for Tom’s judgement about the disputed sentence. He was holding the book in his hands, saying, to our surprise, not in Hungarian, but in English: “all in this Hungarian book is perfect. By the way, Hungarian has no imperfect tense”. The linguistic remark is true.

The Hungarian publication of “*You know my method*” was a complete surprise to me. The translator was an excellent literary scholar, József Szili, whom I happened to know since my university years. But nobody among the Sebeokite Hungarian semioticians knew about the coming

translation. I saw the paperback in a Budapest subway station, among other thrillers. It was very difficult to buy a second copy. Finally at the bookshop of the (then already previous) “Communist party” I was able to find three more copies. One exemplar was immediately sent to Tom by airmail. He later told me that he did not know either about the existence of the book in Hungarian. The translation is fluent and correct. Perhaps the precise meaning of the Peircean term “guess” is absent from the Hungarian translation.

I do not remember if Sebeok got any royalty share from the Hungarian publishers. However, when negotiating about the publication of his collected essays by the Hungarian Academy Press, he often said that he did not care about the royalty, only about the quality of the Hungarian publication: “Nem a tantiémet, a kvalitiémet akarom”. Another nice pun on Latin words in Hungarian: ‘I want not my *tanti*-eme but my *quality*-eme”.

In very many of his papers there is a reference to Hungarian persons and their works. “It is my tag” – he said. He was continuously asking for the participation of Hungarians in handbooks, conferences, committees, etc. After his death, all similar gestures disappeared. Knowing our economic difficulties, he arranged for us free lodging, daily allowance, etc., in our trips in abroad. I know he has not very often received words of thanks.

He wrote extensive and very positive papers about famous Hungarian linguists (e.g. Gyula Laziczius, John Lotz). But his relation to the Hungarians was not without clouds. He had among the Hungarians not only friends, but also foes – and not only among those who lived in Hungary. There are stories that he was declared by the Hungarian authorities as *persona non grata*, someone who ought not obtain an entry visa. The story has its variants: it happened either before 1956, or in 1964. There might be two different reasons. I can but guess. . . .

By the way, Tom has collected along the way and over the years a lot of good friends and a similar amount of enemies. Tom’s employment policy was to pick as “heirs” or “crown-princes” persons from a distance: not from Bloomington, not from the same field of research, and if possible with some extraordinary background. Retired colonels, people once upon a time married to pianists, people who owned a circus, scholars who never finished any university with degrees, persons who spoke fluently French, etc. – all were for a while Tom’s favorites. Usually they clashed soon with Tom, who was an authoritative boss.

The same policy was typical for selecting friends. Tom was very fond of, for example, an isolated psychologist, a director of a zoo, a geneticist

with a huge aquarium at home, and one of his closest connections was an American Indian family, with whom he annually spent weeks in the summer. I cannot drop myself into that box, because my primary interest (folklore) was also an everlasting field of interest for Tom. If we list his closest friends – semioticians (such as Claude Lévi-Strauss, Umberto Eco, Juri Lotman, Eero Tarasti, John Deely, Susan Petrilli, Augusto Ponzio etc.) – it will be an eminent selection of scholars coming from different fields of studies: structural anthropology, philosophy, theory of literature, culture studies, musicology, etc. Tom’s selection clearly expresses his ability to integrate various topics into his “Semiotic sphere”.

Coming back to his Hungarian contacts, in 1990 I was able to propose him for *Doctor honoris causa* at my university (Eötvös Loránd Tudományegyetem). I wrote the proposal and the *laudatio*. It was not easy, but finally it was not a difficult struggle, because there are always many candidates and less “free” places. The ceremony went very smoothly. Before that occasion I had supposed that Tom, being a world famous scholar in different fields, had already collected a lot of similar honours. But it was not the case. Budapest offered him the first “Honorary Doctor’s Diploma”. (Helsinki, for example, gave the same honour much later.) Tom was thus “inexperienced” in such ceremonies. Then he used to dress informally (striped shirts, short sleeves, no tie, terrible looking blue jeans with money belts, sandals, summer hats, etc.); several times he asked me: “Is it necessary to wear a tail coat? If yes, I will not come.” First I was “teasing and frightening” him by saying that tail coat + tall, cylindrical hat is obligatory – in order to get him agree in the middle. After some consultations with secretaries in the Rector’s office, we asked Tom to wear a dark suit and moderate shoes. The celebration happened in nice weather, Jean and Tom looked very smart indeed. And Tom became a good friend of the Rector of Eötvös Loránd University.

The Hungarian Academy of Sciences elected him as “Honorary Member” in 1993. I wrote again the necessary papers, but the initiative came from Miklós Szabolcsi, member of the academy and an expert in 20th-century literature. They knew each other from the time they were toddlers (!), since their parents were friends. There exists a famous photo of the two, perhaps three years old, naked boys in Lake Balaton. First there was only a hearsay rumor concerning the existence of the photo, both from Szabolcsi and from Sebeok. Tom added: “you will show the picture if you want to arrest me for being involved in pornography”. When we celebrated Tom’s 80th birthday in Imatra, returning to the “naked-lake photo” story, he added: “since then morals have changed. Perhaps today I could earn money by putting the picture on the web”.

The election of Tom to our Academy was simple. And there was not a great celebration. But afterwards Tom had “free access” to some facilities in the Hungarian Academy: guest rooms, also in the Academy summer house, free taxi rides for funerals of deceased members of the Academy, etc. As far as I know, he never used them. After becoming a “member” of our academy, Sebeok started to recruit other “foreign Hungarians” too. He sent messages in favour of Mihály Csíkszentmihályi, the famous (of course American-Hungarian) psychologist, author of the *Flow*. In 1998 Csíkszentmihályi became indeed a “member from abroad” of the Hungarian Academy.

During his earlier visits to Hungary he had already met János Szent-ágothai, who later (1977–1985) became the President of the Hungarian Academy. Both gentlemen were interested deeply in brain research, but their major sympathy arose when each learned about the other’s “skeptical” activity”. It is another less known fact that Tom has been a member of an international group of intellectuals (“the skeptics”), who regularly meet and discuss falsifications, and have tried to fight the obscurantism in science, knowledge, and belief. Even during his short visits to Hungary Tom managed to attend such meetings. He did mention the fact, but I never asked whether I could come with him to such meetings. It was a pity not to learn more about that activity.

The highlight of Sebeok’s Hungarian contacts was the celebration of his 70th birthday in 1990. From September 30 to 4 October of that year, about fifty participants of two international meetings gathered, first in Budapest, then in Vienna, in honor of Tom. Since there exists a nice publication of the two conferences (“*Symbolicity*”, edited by Jeff Bernard, John Deely, Vilmos Voigt, and Gloria Withalm [Lanham – New York – London: University Press of America, 1993]), here I need add only some personal remarks. In Budapest I was the mastermind of the events, in Vienna Withalm and Bernard did the same. The publication was organized by Deely. The participants came from three continents, and Jean Umiker Sebeok was also present with their two daughters. Some nice greeting talks, fine receptions, and a lot of witty gifts topped the event. All the scholarly papers (about 30!) had references to Tom’s multiplex activity. It was indeed a friendly gathering, with tears in eyes!

As for the humorous and down to earth side, I can recount only some episodes, from the Budapest part of the event.

Curiously enough, Tom was afraid of his relatives, the Paldons – an uncle Ervin and an aunt Klári – whom we should definitely invite to the birthday conference, but who are not scholars, are very critical, etc. I never saw Tom be so anxious or shy, even among the world-number-one

celebrities with whom he so often mixed. In front of those celebrities Sebeok was always outspoken, presenting his opinion, which was sharp, and not tamed with courtesy. But the relatives made him uneasy . . . He wrote several letters, containing different warnings about the issue. Finally – everything happened with full success. All the relatives were very cooperative, participated enthusiastically, and I received very nice letters of appreciation from them. They praised Tom, the event, and the organization.

The Budapest meeting was organized in the “Kossuth Club”, an office for free education, in a nice two-story building next to the Hungarian National Museum. According to the preparations, the meeting was scheduled on the upper floor, while on the ground floor the greetings and the food and the birthday cake would be served. My conference talk was about ape paintings from a Hungarian zoo, with coloured copies of the “paintings”; and in the conference folder of the participants there was a personally selected colour xerox copy of one of them. The day before the Sebeoks’ arrival heavy rain destroyed the upper floor! There was literally a flood in the room and on the stairs. Fortunately, the ape paintings were saved; but the lectures and the food could not be separated afterwards – not to mention some problems with the washrooms. When, on the morning of the very day I arrived to the Kossuth Club, and I heard the devastating news, I saw a *clochard* sitting on the majestic leather armchair, specially arranged for Tom, chewing the priceless sandwiches and collecting the copies of the ape paintings into a dirty plastic bag. Even today I do not remember how I managed to take care of everything. And, after all, in the general opinion the Budapest meeting was technically acceptable.

Perhaps the chased-away *clochard* is responsible for the following gossip: “somebody” has stolen the Hungarian ape paintings. Years after the Symbolicity meeting in Budapest, in a Hungarian newspaper, an article was published with a story of a sensational capture. The truth is but more exciting! Because of television programs from the 1970s, in Hungary, everybody knew about the famous chimpanzee from the Veszprém zoo, *Böbe* (Hungarian diminutive for Elisabeth), who, with the help of the keepers, made colour drawings and “paintings”. For the Symbolicity meeting I tried to make a morphologic classification of all of “her” paintings. Curiously, I found among them a completely different group of five paintings. Only later did we learn that they were made by another ape (!) in the Veszprém zoo, a boy, named *Misi* (Hungarian diminutive for Michael), who was absolutely unknown to the

greater public. When I told Tom proudly about my discovery, he replied: “it was as simple a task as to find a new Italian painter of the *Trecento*”.

The participants left together by a hired autobus to Vienna. At the Hungarian/Austrian border there was only a small problem with currency change. But before reaching that border John Deely was made the (only) “Life Member” of the Hungarian Semiotic Society, after having donated all his coins to our Society.

The Sebeok daughters sat on the back seats of the bus. They were yelling to other cars, but with not much effort. Only later we learned that they had written on a huge piece of paper: “HELP! WE ARE KIDNAPPED BY THE WILD SEMIOTICIANS!” But the windows of the bus were so unclean that perhaps nobody could read the message; for sure nobody came to free them.

It was a rainy day, and we arrived by evening to Vienna. Tom always stayed there in the same hotel in the downtown area, and he was insisting to do so this time. But the Hungarian bus was too huge for driving in that district. It drove slowly in zig-zag and finally it got stuck at a street corner, blocking the traffic completely. It took the driver an hour to maneuver the bus into a backwards escape. . . . Then, in some hotels where reservations had been made, the reception people did not know about us at all. . . . It was midnight when the totally nervous and tired Gloria and Jeff could “deliver” the last participant into the well-needed bed. . . . But all other parts of the Vienna meeting were excellent and a full success.

Still I am at the beginning of telling stories about Sebeokan-Hungarian contacts. But I have to realize, that my allowed space is too small for many more stories. However, it is necessary to say that Tom was not only a friendly scholar to me, but he was a family friend. Kincső (my wife) knew him also for very many years. Tom brought fantastic toys to Vili Jr. Once the Hungarian Academy booked Tom a flat for rent, because its owner was abroad. We soon we realized the landlady was a schoolmate of Kincső, and she was at the same time in Bloomington, Indiana! With Tom we often attended concerts in Budapest. Once we saw the manager of the Budapest Festival Orchestra, who was one of my previous students. When I introduced them to each other, Tamás (Körner) immediately referred to some of Tom’s works – which moved Tom quite deeply.

But let me tell about our other private and personal stories another time! I had the privilege to write a biographic entry about Tom for an encyclopaedia, reviews of his books, and – alas – an obituary in the monthly review of the Hungarian Academy (*Magyar Tudomány* 2002/5). So in my short sketch here I could be more personal and anecdotic.

Still, I have to say some scholarly and evaluative words about the two nouns in the title of my paper. Thomas Sebeok had a very complex identity: being American and Hungarian, and, of course, a Jew. He was a linguist, but active in very different chapters of linguistics. He was an excellent historian of researches concerning communication and speech, back to the Greeks while also fully knowledgeable about the most modern studies. He was also a very good theoretical biologist. And, for us, he was the founder of the contemporary international semiotics. He moved very quickly from one topic to other: from phonology to structuralism, from psycholinguistics to animal communication, from speech surrogates to Peircian representamens, from zoosemiotics to a nuclear waste “priesthood”. His diversity was the cornerstone of his integrity. One will never find a discrepancy between his works, even though written about the most different topics.

And behind the colourful identity of Sebeok there is the firm background: his integrity. He was one of the very rare persons who was not a split personality. He could see, understand, and teach the world from a holistic point of view. Among his earliest publications there are papers about Austronesian languages; his (mostly unpublished) American Indian studies and fieldwork may open new vistas for his biographers. He admired biologists, he quoted writers. His integrity is the key for his identity. Being a global traveller and *Weltbürger*, he was a devoted American and a born Hungarian. He was a rationalist and a skeptic, with tears in his eyes, when he was watching the film *Casablanca*, even for the hundredth time. (As we know the film is ideologically multi-structured, with sudden contradictions in some of the main protagonists. But one of the main heroes there is a Hungarian revolutionary, who had to leave his home country.) Identity and integrity are two keywords for understanding the great scholar and true man.

Even after his death Tom Sebeok is still able to develop miracles: e.g., I could find twice the manuscript of mine, which seemed to be lost (or unwritten) for ever. The first time it was John Deely who had a copy of it. The second time I lost the text one of my students found it, while correcting another manuscripts from a book about the famous Hungarian Renaissance King, Mathias Corvinus. How Tom could project himself as incorporated into Renaissance scholars in Hungary of the 15th century (definitely a circle he could much be interested to join) is a good sign manifesting his endless capacity for “identity and integrity”.

Chapter 19

Birth of a notion

W. C. Watt

The contributions made by Thomas A. Sebeok to semiotics can scarcely be overestimated. He was the re-founder of the discipline, in 1962, and remained its universally-acknowledged *doyen* until his untimely death, at 81, at the end of 2001. He not only edited the field's premier journal, *Semiotica*, during the whole of that time – and performed this task in a benevolently proactive way – he also, at conferences and in private (often epistolary) converse, molded almost everyone else who undertook the serious study of signification. I doubt that there was a single article or review that appeared in *Semiotica* during his stewardship without having undergone his syllable-by-syllable scrutiny; I doubt that there were many who gave a paper within his hearing who didn't, mostly in private later that day, receive his comments of praise, correction, or expansion.

In all of this, perhaps most remarkably, Tom (forgive the familiarity, we were friends for many years) never once (to my knowledge) “put on the dog”: he had little reason to be humble, but never saw cause to be overbearing. It was not in his nature, nor in his background as a European scholar and as one who was schooled in two of our best institutions, Princeton and Chicago, where perspective is tacitly inculcated. In Tom's case this perspective seems to have included every one of his predecessors in the quest for understanding how one thing can signify something else: certainly he knew his Aristotle and the Greek and Roman Stoics, including St. Augustine; his medieval scholars (especially João Poinot, thanks in large part to John Deely); and, without parallel, his Peirce and his Charles Morris. If that kind of background knowledge doesn't put one in mind of one's being last (though scarcely least) of a long chain, I don't know what could.

On the other hand, Sebeok made cardinal contributions to semiotics that his predecessors would, I think, have greatly appreciated, as do we. Surely no one else has added so much to our appreciation of the universality of semiosis, the connecting of some sign to what it signifies: among our fellow primates; among our still lesser kin; among bacteria and even plants. This widening of the field's scope will be among his most lasting bequests, surely. In all of this broadening, though, Tom never lost sight

of the fact that, unhappily for us, at the peaks of semiosis we humans stand alone: only we possess language and the heights of thought that language makes possible (or forces into being); despite the hopes of many, myself included at one time (as Tom well knew, but condoned as an honest mistake by a callow colleague, and published in *Semiotica* withal) our nearest relatives – chimps, most notably – fall a little short of our wish to communicate. (Tom also had, in private, a few pessimistic remarks to make about the likelihood of our coming upon creatures of our own communicative abilities elsewhere than on the Home Planet; he enjoyed my exposition of “Martian hands” but took it, as meant, as a salutary myth.)

In addition, though, Tom also made contributions to semiotics that are of another sort altogether: for instance, he extended Peirce. (He also greatly clarified some of Peirce’s more gnomonic remarks.) I wish in what follows to focus on just one of these extensions, not because it is necessarily the most important or more pressing of them, but because I personally find it so. It has to do with how chains of signification, coursing over the three ways (iconic, indexical, symbolic) in which some x can signify some y , logically perform together; it derives from an off-hand remark concerning the De Morgan “symmetric” properties of “signifies iconically” that Tom made while discussing other matters (Sebeok 1976: 129–130).

It’s an odd feature of the curiously casual way in which Peirce defined his three kinds of noun “sign,” or equivalently of the verb “is a sign of” or “signifies,” that, so defined, “signifies” is but ill-equipped to play a role in deductive chains of signification: in what I have called, proleptically (e.g., Watt 2002), the deductions of a “semiotic calculus.” This is easily shown. To introduce the topic, take “is an indexical sign of” or “signifies indexically.” Peirce’s example, the weathervane, provides a good instance. The weathervane points south, and so signifies that the local wind is a southerly. The local wind is a southerly, which signifies (in my part of the country, Southern California) that a storm is likely. Does, then, a south-pointing weathervane signify that a storm is likely? Yes, to an observer who knows the significance of both indexes, for, as Peirce was careful to point out, a sign signifies only to him who imputes significance to it; otherwise, signification is left up in the air, it’s devoid of signification. So let’s add an indication of two sapient observers: for A, if a south-pointing weathervane signifies a local southerly, and if for B a local southerly signifies a likely storm, does – for anybody – the weathervane signify *ipso facto* the coming storm? Of course not. So let’s make $A = B$, so that the same guy is involved in both imputations of significance. But

this is really no help, for what if our single observer, A, has a lapse of memory about what a southerly signifies, or if he's in the early stages of Alzheimer's, or, more simply, if he's a lunatic and denies obvious connections? As we see, under Peirce's rather casual (or at least colloquial) definition of "signifies indexically," all we know is that if A finds indexical significance in something, he then finds indexical significance in that thing.

But there's worse to come. What of iconic signification? What if A finds that the depiction of dark clouds in a painting (say, by J.M.W. Turner) iconically signifies actual dark clouds; and if also for A actual dark clouds iconically signify the water they contain hence the rain they may bring? Does, then, for A, a depiction of clouds in a painting signify a coming rain-storm? So does he go for his umbrella? Certainly not. The very idea is ludicrous, unless A is a lunatic. But surely useful chains of deduction based on the connective "signifies" cannot depend on the cogitations of crazy people; that way lies lunacy for us all.

The trouble with such "deductions," or "inductions," or even "abductions," is of course immediately apprehensible: the dark clouds in the painting are a depiction; the dark clouds of reality are physical entities. The trouble lies in these signs' indexicality, in other words. For every sign, to be one, must achieve instantiation in the physical universe, be this only in someone's synapses; every sign has indexicality, then, if that indexicality amounts to nothing more than an indication of where (and how) it is physically located. So the trouble with the chain of reasoning discountenanced just above can be expressed this way: the signs involved are not on the same indexical plane, so to speak; they are not, in a term, equi-indexical. As we see, then, the indexicality of iconic signs can counter their roles in indexical reasoning. Only a lunatic sees Turner's depiction of dark clouds and, in another indexical realm altogether, grabs his broly.

In short, the iconic chain of reasoning instanced, "transitive" in De Morgan's sense, is also *indexically* transitive only if equi-indexicality is also taken into account, and formally: [(If p iconically signifies q) & (if q iconically signifies r) then (p iconically signifies r), for every p, q, and r], implies the same semiotic syllogism for "indexically signifies" only if p, q, and r are equi-indexical. In the case at hand, "equi-indexicality" means that p, q, and r must *either* all be depictions *or* must all be images seen in the real world. An obvious point, no doubt, but – since *all* significations have an inherent indexicality – one with dire implications, as see just below.

This is a radical way of looking at Peirce's three kinds of signing, for we see that a failure of equi-indexicality invalidates any indexical implica-

tion of the above chain of reasoning employing “iconically signifies.” Substitute the general verb “signifies” for “iconically signifies,” and the result can be nonsense for “indexically signifies,” *which is included in any general verb “signifies.”* So any attempt to make the verb “signify” a general logical connective like the connective “implies” is doomed to failure, unless great care is taken to specify equi-indexicality. Otherwise the verb “signify” (or “is a sign of”) is undependable and dangerous. There are three signifying verbs – “iconically signifies,” “indexically signifies,” and “symbolically signifies” – and subsuming them under a vague verb “signify” – unless, again, due care is taken to limit their reach – is to be avoided at all costs, unless the reasoning of lunatics is at issue.

(Actually, there are more than three “signifying” verbs. Take the letter “O,” for instance, which for many people is taken (falsely, but understandably) to betoken the sound /o/ because it represents the rounding of the lips when making an /o/. For such folks “O” is iconic, but not in any way that Peirce specified. It’s iconic in modeling the means of the expression of what it signifies. “O”, then, is an “omicron,” a fourth sort of sign. Or take the ram’s-head sign of the Dodge automobile. This signifies a Dodge by signifying an animal that evokes the verb “to dodge,” which word in turn symbolically signifies the name of the car (originally, that of the Dodge Brothers): so the ram’s head is not (in the traditional sense) indexical; it is not (directly) iconic in Peirce’s sense; and certainly (since it’s far from arbitrary) it isn’t symbolic. The ram’s-head is a “dodge,” a fifth sort of sign. Nor is it unique in this respect, since the “arrow” hood-ornament that signified the Pierce automobile till the late 1930’s – latterly known as the “Pierce Arrow” – is of a kindred sort. These points raise a further one, that of what I have elsewhere called the “synesthon.” To illustrate further, suppose someone says “I really hate George W. Bush, that little shit” – using a common if doubtless overly-colloquial metaphor – but then, on coming upon an actual pile of ordure, identifies it as referring to George W. Bush. The pile of ordure is a sign, but of an unusual kind, at first glance at least: it stands for Bush not because of its iconic resemblance to him, so it’s no icon; nor because it is somehow physically connected to him (as a weathervane is to the local wind), so it’s not a traditional index; nor yet is its association with Bush wholly arbitrary, so it’s not a symbol. It works as a sign because it and Bush evoke similar feelings in the speaker: it’s a synesthon, then, as I’ve called it elsewhere (e.g., Watt 1999). The pure synesthon may be rather rare, but extended synesthons are not, since icons are after all also synesthons in evoking in an onlooker similar visual perceptions, which are feelings of a sort; and

indexes are synesthons in evoking in an onlooker the feeling that, for instance, the weathervane he is gazing at and the local wind are connected. In fact it may be well to consider the possibility that there are really only two *fundamental* kinds of sign, the synesthon (which bonds sign to signified by occasioning similar perceptions or feelings about both) and the symbol (whose bond of sign to signified is wholly arbitrary, and so depends far less on “feelings” of any kind than on pure intellection, unless that too is just a “feeling”, which I doubt). The synesthon can (and must) then be subcategorized as consisting of the hyposynesthons icon, index, omicron, dodge, and so on). The last two are perhaps useful additions to Peircean lore (though I have to admit I haven’t read every one of The Sage of Pike County’s tenebrous pages: *Persius longus, vita brevis est*).

Returning to our main theme, what the foregoing story means is that there is no dependable general verb or logical connective “to be a sign of” or “signifies”, there are (at most) only specific connectives like “to be an iconic sign of” (or “iconically signifies” or “iconizes”) and “to be an indexical sign of” (or “indexically signifies” or “indexicizes”). The general connective “to be a sign of” or “signifies” is a myth, albeit a nice one, a generalization over connectives that are not just distinct but incommensurable. In a nutshell:

- (1) “If p iconically signifies q & q iconically signifies r then p iconically signifies r” is valid. “Iconically signifies” is transitive in the De Morgan sense.
- (2) “If p indexically signifies q & q indexically signifies r then p indexically signifies r” is valid *only if* p, q, and r are specified to be equi-indexical. (In the “J.M.W.Turner” instance used above, only if p, q, and r are either all depictions or all conditions in the real world). (Further work will doubtless unveil further restrictions; equi-indexicality is a topic in its own right.)
- (3) The vague verb “signifies” *always* subsumes “indexically signifies” (because any sign, to signify, must be physically realized somehow). So recasting (1), just above, so as to replace “iconically signifies” with “signifies,” would risk making (1) pragmatically invalid in the sense that it might then be valid only for the “reasoning” of some lunatic who reaches for his broly when viewing a Turner.
- (4) So “signifies” is to be used with great caution, and were perhaps best avoided altogether. The same comment applies to “is a sign of” and to any use of the noun “sign.” They are all, from the viewpoint of a serious study of semiotic reasoning, treacherous.

It remains only to note that this whole discussion of semiotic connectives springs directly (indeed, irrefragably) from a stray remark made by Tom Sebeok a few years ago. His work, his deep insights, his influence on those of us who follow, will endure, assuredly, as long as semiotics does. Which is, and will ever be, all to the good, as future research in strict semiotics (in the semiotic calculus to come) will surely show.

References

Sebeok, Thomas A.

1976 *Contributions to the Doctrine of Signs* (Bloomington, IN, and Lisse, Netherlands: Publication of the Research Center for Language and Semiotic Studies of Indiana University, together with The Peter De Ridder Press). Reprinted with an extended Prefatory Essay by Brooke Williams, "Challenging Signs at the Crossroads", evaluating the book in light of major reviews (=Sources in Semiotics IV; Lanham, MD: University Press of America, 1985).

Watt, W. C.

1999 "The Synesthon", in *Interdigitations: Essays for Irmengard Rauch*, ed. G. F. Carr, W. Herbert, and L. Zhang (New York: Peter Lang).

Watt, W. C.

2002 "How to Signify with 'Signify'," *Interdisciplinary Journal of Germanic Linguistics and Semiotic Analysis* 6, 233–255.

Chapter 20

Thomas A. Sebeok:

On semiotics of *history* and history of *semiotics*

Brooke Williams Deely

Overview

Thomas A. Sebeok moved beyond the boundaries of pre-existing philosophical paradigms toward what semiotics has become as a new paradigm for all the disciplines. Yet such is the indeterminate action of signs in human history that can realize alternate cultural paradigms (as Sebeok himself thematized) that the direction that he took, however “determined” it now seems in outcome, was then only a possibility. In his own vision and direction for semiotics, he drew upon the central intuition of diverse and at times competing schools of thought, while his own work, in its practice, transcended the limiting frameworks of the schools he drew upon – even though, in his pursuit of this paradigm shift, he sometimes himself became entrapped in the “semiotic lag” of so-called “realism versus modern idealism”, whereas his own direction intrinsically transcended this impasse, as I will show. In such an exploration of the land of semiotica, he led the way in collaborative enterprise, toward mapping new frontiers in semiotics. The semiotic horizon expanded, as discourse developed, thanks immeasurably to his own path-breaking contribution to the semiotics of history, as well as the history of semiotics, in developing the doctrine of signs as what is now a transdisciplinary perspective.

As a historian, my humble task is to address Sebeok’s contribution only to what he called “that minuscule segment of nature some anthropologists grandly compartmentalize as culture” (Sebeok 1984: 3). He understood how the “culture” thus compartmentalized itself refers back – through experience and as a semiotic structure – to the nature it presupposes.¹ He called this human historical situation “the intersection of nature and culture”, as a dynamic interplay between nature and culture in human semiosis whereby, through language, humans continually remodel the world by lending new signification to past history, in forging the future

1. Sebeok 1967, 1976, 1984a: 3. See also Sebeok 1982 on this point in relation to Poincaré 1632: Book I, question 1: 118.

according to present needs. In such semiotic interplay between nature and culture, he claimed (Sebeok: 1987, 1988) that language is not first of all a means of communication, but a means of modeling the world. His own coinage of the term “anthroposemiosis” is therefore, in the broadest sense, co-extensive with the history of the human species, individually and collectively, in its prior relation to nature.

Since Sebeok realized that humans can know anything only through the mediation of signs within human experience, he therefore duly weighed and considered *history itself* as central to all the disciplines, including the sciences, which themselves develop within historical context. We can therefore appreciate why he turned, *prospectively*, to the Peirce-Locke-Peirce philosophical tradition (inclusive of the literary tradition in semiotics), in order to develop the future of semiotics as a new paradigm. If the resultant paradigm of semiotics works for *history* as a *discipline* – one heretofore without a proper paradigm – this crucial testing ground is indeed evidence of a theoretical perspective at the matrix of all the disciplines, a commonality of perspective.

In Part One and Two, I will reflect on how Sebeok contributed to history both as a discipline and on the further implications for all disciplines, specifically, in Part One, in regard to the logic of history and, in Part Two, in regard to the role of the historian as observer. In Part Three, I will reflect on Sebeok’s intellectual vision as it developed in relation to discourse within semiotics on the future of semiotics, marking a crucial crossroad in that very development.

Part One. Introducing Thomas A. Sebeok

I drifted outside my discipline, one fall day, on October 3, 1978, to register at the third annual meeting of the Semiotic Society of America (SSA), as the first historian who became a member of this society. In my discipline “semiotics” was a suspect word. Historians confused it with “semiology”, which they saw as an exclusively linguistic model of human experience, one which visited upon the discipline a theory accruing from modern philosophical idealism, a theory that provided no frame of reference for the mode of inquiry historians use. As one of them (Harlan 1989: 583) put it: “Historians are a skeptical lot. They tend to feel that one should trust one’s nose, like a hunting dog. They are afraid that if they once let themselves be distracted by theory they will spend their days wandering in a cognitive labyrinth from which they will find no way to depart”.

Was I fantasizing to hope to find in “semiotics” an inherently interdisciplinary perspective beyond the boundary of my discipline, while inclusive of it? What, first of all (as historians wanted to know), was the relation of semiotics to *history*? And what, beyond history as a discipline, did history itself have to do with *semiotics*? I had no clue how to answer such questions. Nor, at that time, had I, like most historians, yet heard of Thomas A. Sebeok.

So I felt out of place, headed in the corridor toward the registration desk that day. But no one noticed. Well, one person did notice. A distinguished looking man with a gray beard and glasses turned from his conversation with someone to ask me, in a welcoming manner, “Who are you?” His name-tag said “Thomas A. Sebeok”. That name was an object of awareness to me, but not a sign of whom some called “Mr. Semiotics”. I introduced myself as teaching in an interdisciplinary honors program at the University of Delaware.

“What’s your field?” he asked, with a remarkably keen interest. I replied, with full detail, “I’m a historian of modern Europe, with fields also in medieval Europe and Middle East”, and I assumed that would be the end of his questions. But instead he raised the one question spinning in my own mind as still unanswerable, “What’s a *historian* doing *here*?” He looked at me with the intensity of a dog offered a bone.

“I’m here to find out what semiotics has to do with history”, I said, hoping to escape further inquiry. But he asked me yet more challenging questions before I had a chance to ask, “Who are you?”

“I’m Thomas A. Sebeok”.

His name tag had told me that! I focused on the vocalized “A.” I clarified: “I mean what’s your field?”

“*Semiotics*”. He mentioned also linguistics and biology, and I resumed my way to the registration desk. At least something about his keen interest in the curious presence of a *historian* reassured me that I was not alone in my musement.

My first encounter with Sebeok illustrates his well-known magnanimity and magnetism, which attracted people to semiotics. One hears many stories of his going out of his way in corridors to welcome people, young and old, known and unknown, to semiotics. In my case, he knew who I was before I knew who he was.

Yet what struck me most, in my first impression of him – which time continually confirmed – was his humble intellectual curiosity, his quest to deepen human understanding, a quest which, in my view of him, motivated his posing challenging questions and his encouraging people,

however new to semiotics and however unknown, to contribute to this semiotic enterprise. While his legacy is due in large measure to his legendary organizational genius, I, as one whose field is intellectual history, will focus on his own intellectual vision of a developing doctrine of signs, as a quest oriented to the future in dynamic interrelation with the past, toward a commonality in point of view across the disciplines.

In so doing, I bear in mind, as illustrative of my point, the telling testimony from the past of three people who worked especially closely with Sebeok in organizational matters, namely, Paul Bouissac, Eugen Baer, and Charles Morris. Paul Bouissac, himself a consummate organizer in semiotics, expressed the interrelation between Sebeok's own personality, his organizational perspicacity, and his intellectual perspective thus (1979: 206):

The impact of a creative, efficient, and well informed personality on the process of disciplinary crystallization must not be underestimated; it may indeed be decisive, especially if this personality is endowed with a clear vision of the direction to take and has an acute sense of the existing possibilities for implementing converging tasks.

The first elected President of the Semiotic Society of America, Eugen Baer, once recounted to me, in an interview (Baer 1987), how the actual creation of the Society in 1975 was owing to "the strong personal achievement of Thomas A. Sebeok in the sense that another type of personality could not have achieved it: without his vision and organizational genius one cannot really understand the phenomenon of its creation *ex nihilo*". Even the historically laden word "semiotic" in the naming of the Society is, as Baer pointed out, an indexical sign of Sebeok's own broad intellectual vision and direction, as "founding father", inasmuch as he moved the field, as it were (see Sebeok 1971: 261), from semiology as frame of reference to "semiotique".

Sebeok's broad vision for semiotics traces historically to the conceptual influence of Charles Sanders Peirce, as well as, in a more qualified but none the less real sense, to Charles Morris, then later to John Poincot (as a result of John Deely's retrieval of Poincot's early 17th-century *Tractatus de Signis*), along with Locke from the first in the matter of naming the study of sign action. Morris himself (1975) participated in the founding of the Society, as did John Deely, who also wrote the SSA Constitution (under Sebeok's guidance of the formulations of the committee which Deely de facto chaired). At the request of Sebeok, as a historian I once

researched the first years of the Society. In the archives, I found a personal letter to Sebeok wherein Morris credited Sebeok's own shaping influence for the "growth and vitality" of semiotics as "one of the major intellectual movements of our time".²

Now back to my second encounter with Sebeok, that same fall day when I first learned who he was and what he had to say to me about the discipline of history.

Sebeok on the logic of history

The mysterious man who had earlier welcomed me in the corridor now appeared on stage. The title of his topic was "You Know My Method: Sherlock Holmes and Charles Sanders Peirce". I hoped he would give me a clue to what semiotics has to do with what historians do.

That afternoon I had visited the book exhibit, in pursuit of such a clue. Nathan Houser had kindly told me there was, as yet, no introduction, as such, to semiotics, so he handed me a work on Charles Sanders Peirce and Umberto Eco's *Theory of Semiotics* (1976). Proving no quick study of Peirce, I turned in hope to Eco. "Theory"? "Semiotics"? Two words traditional historians thought especially dangerous. I read, reaching down deep, until I came up for air, lest I drown. Just then John Deely stopped in the book exhibit, and, seeing Eco's book in my hands, asked, "What do you think of Eco?"

"I think he's on to something, but I'm still mystified. As a historian, I need an introduction to semiotics."

"I see what you mean. Poinsett is really the place to start. He says it all so clearly". Deely added a few words I only vaguely recall, except for how the sign transcends the distinction between "mind-dependent and mind-independent being". What? Nowadays Eco, too (2009), uses this as standard terminology from Deely; but back in that day I still had no clue what such words had to do with history.

"Poinsett? Where is he in the book exhibit?" I quickly cast my eyes upon the books on display.

2. For Sebeok's own chronicle of the interdisciplinary movement and field of semiotics, with its accompanying conferences, national and international conferences, associations, symposia, publications, and so forth, particularly since the Second World War, see Sebeok 1974.

“Not time yet. I’m about to publish a bi-lingual translation of his treatise on signs, and I have only the unpublished manuscript here. Sebeok once wrote me saying that ‘this work simply *must* be published’, even before we had personally met.”³

“Sebeok! I just met him myself. But who is Poinot?”

“John Poinot. Poinot is his family name. In the Latin Age, he went by John of St. Thomas, a name either taken by or given to him upon joining the Dominican Order in Spain after growing up in Portugal and graduating from Louvain in the Netherlands.”

“John of St. Thomas! But I’ve been reading about him for years throughout Jacques Maritain’s works, and I’ve always wanted to know more about him. What does he say about semiotics in relation to what historians do?”

“You’ll find out when you read him”, a statement of course which neither gave nor left me with any clue!

Sebeok was my last chance that day. I sat expectantly in his audience, hoping for that clue. He said not a word about history. But he held me spell-bound, as if he were a magician (which he actually was, I later learned; it was one of his ties to Morris). I felt in suspense and forgot about history, such was his performance, his perfect timing, and his placement of the “trifling detail” that leads to abduction.

“Abduction?” Suddenly, in a flash of insight, I saw Sebeok reveal the logic of history that historians actually use. I could see that such a mode of reasoning has no place in the “theory” of history, as neither a social science as such nor an art as such. Now I had my clue where to start with semiotics in relation to history.

I had a hunch, thanks to Sebeok’s having so introduced me to semiotics that evening in 1978, that nothing short of a re-posing of questions in historiography, now in relation to Sebeok’s own host of questions, could prove adequate as a philosophical accounting for what historians do, whether or not self-reflexively. After all, the suspicion of historians about semiotics had much to do with what they then mistook for its literary tradition (semiology), and with the pre-existing paradigm of modern philosophical idealism, which semiology seemed to take for granted. If historians cannot refer back to nature through the mediation of signs,

3. Almost eight years later, Sebeok (1986) reviewed this long-awaited publishing event in a two-page review in the Easter Sunday Edition of the *New York Times*.

what is the point of musing over who killed the medieval king William Rufus? Why not simply write historical fiction?

What would be Sebeok's response, I wondered, to C. Warren Hollister, a great medieval historian, who puzzled over precisely that question of who killed William Rufus? So I began my inquiry by asking Hollister (a former major professor of my graduate student days) to reflect on his "method", because what he said, I told him, would be of special interest to semioticians. He responded in a letter (Hollister 1983) to my question about his mode of reasoning – as a historian – that surely what he had to say would be of "no interest to semioticians" because he in no way reflected on his "method", but rather proceeded simply by way of "hunches and guesses". Furthermore, as he put it, "Were I to reflect too much on my method, I fear I would cease any longer to do history".

Historians tended, in general, to dismiss the question of the logic of history, in just such a manner. They realized that their so-called "method" resists traditional logical classification, given that the historian's method is not primarily reliant on a-priori truths or deductions from theoretical assumptions. So, with few exceptions, historians defaulted on defining their own mode of reasoning. The conjectural mode of reasoning historians use, predicated on their familiarity with sources, involves all the imponderables of a seasoned knowledge of human nature and a highly developed capacity for hunches and guesses. As Pardon E. Tillinghast put it (1972: 14–15):

We are quite aware that most other disciplines, both in the sciences and in the humanities, have long since come to test external reality by using models that can be analyzed mathematically. . . . We know perfectly well that our method of work resembles puzzling and pondering. . . . We develop, not so much a feeling for what must have happened – but for what our experience and training tell us could *not* have happened in the particular situation. . . .

Within pre-semiotic paradigms, this underdeveloped logic of history has resisted both a superimposed linguistic analysis and attempts to subject its object of inquiry to analysis by the tools of a purely formal logic borrowed from late modern philosophy. Since history as a discipline is necessarily rooted in the time dimension of anthroposemiosis, which natural language can best express, historians find the texts they work with to be resistant to such restrictive systems as linguistic philosophy and formal logic provide. Yet the social scientists agree with such philosophers that analysis and classification, rather than the underdeveloped logic

of history, are the crux of the matter academically, even in the purely humanistic studies. As a specialization caught between social science and literature, historiography posed the question whether the plight of history as a discipline simply reduces to a problem with the humanistic presuppositions of the discipline, as analytic philosophers have unsatisfactorily attempted to show, or whether this discipline reduces to literature, as the historian Hayden White (1978: 62) has claimed.

From the vantage point of Sebeok's alternative direction of semiotics, after duly weighing and considering the long-lived epistemological "crisis of history" (Marrou 1959: 12) in relation to Poinsoot and Peirce, in a series of essays⁴ I argued that the discipline of history was rather what Sebeok might call, given his scientific penchant for paradigm shifts, "a semiotic anomaly" within pre-existing philosophical paradigms (notably including that of the social sciences). Whatever be the multiple forms of philosophical "realism" or of modern philosophical idealism, the method of historians fails splendidly to fit either of these historically inherited options. That impasse itself had obscured the way of the sign, on that then still-indeterminate journey of history. For, as Sebeok himself so well thematized (Sebeok 1979: 29), the human animal is capable, though language, of re-arranging the mind-set of a culture in an indefinite number of alternate ways.

The realist/idealist dualism of pre-existing paradigms was, back then, a matter to be duly deliberated rather than dismissed and displaced by a semiotic perspective as "postmodern", as Deely (1995, 2001) has since defined or redefined postmodern, properly speaking. At that time, Sebeok himself, who said (1984) that he could write a monograph on his perplexity about idealism, indexed a semiotic lag in his tendency to choose between realism and idealism in favor of idealism, on principle. Yet that paradigm hardly worked for Sebeok as a scientist, any more than it worked for practicing historians. So he posed provocative questions, in collaboration with others, which moved the developing discourse toward an integrally semiotic perspective – a paradigm of its own (cf. Woolf 1929; Deely 1982: 3). This point of view itself would require nothing less than the rewriting of the history of philosophy, not from a retrospective point of view, but from a prospective one newly informed by what semioticians eventually came to realize (cf. Deely 1990: Chapter 2) was the "perspective" or "point of view" of semiotics.

4. See Williams 1982, 1983, 1984, 1985, 1985a, 1985b, 1986, 1987, 1987a, 1987b, 1990, 1991, and 1991a.

Far from an interdisciplinary blurring of genres, and beyond the boundaries of a glottocentrism that cannot refer back to nature, Sebeok himself envisioned the correlative relation – through experience – of nature and culture. His direction for semiotics has deepened our understanding of the logic characteristic of each discipline, but in particular this newer paradigm of semiotics conceives of the larger world of nature, and human experience within it, as extending beyond the confines of any linguistic model for semiotics. That is, the doctrine of signs, in its point of departure from the philosophical past, is founded (as John Deely expresses this foundational point, based on Peirce) not on the opposition between what is independent of the mind and what is dependent upon it, but rather on what is *prior* to such a division, namely, relation, as the phenomenon or “mode of being” which makes possible semiosis in the first place. In the particular case of human history, which is my own “minuscule domain”, this semiotic reality brings nature and culture into experienced relation through the mediation of the sign. On this point, Sebeok, Peirce, Locke, and Peirce do converge in a way that best explains what historians do.

The logic of the historian’s construction of a text must first be understood in relation to the abductive mode of inference, before the further question can be properly addressed as to whether the historian can detect actual sign relations of the past. The “significant detail” that the historian perceives in an act of insight, as the historian C. V. Wedgwood pointed out (1967: 80), connects sign relations in the formation of a hypothesis. Such an insight “illuminates the core of an event”.⁵ This heretofore undefinable act of insight corresponds to Peirce’s description of the formation of an “hypothesis” as “an act of insight”, the “abductive suggestion” appearing suddenly to us “like a flash”.

This method of historians falls into place in relation to the logic of semiotic (the “spiral of semiosis”, as Deely describes it, 2009: 237n5), inasmuch as the co-extensiveness of logic with “semiotic” displaces the familiar “deduction/induction” dichotomy of traditional logic in favor of a trichotomy of abduction/deduction/retroduction,⁶ wherein the development of a hypothesis or “new idea” (abduction) contrasts alike with the internal elaboration of consequences of the hypothesis (deduction) and

5. *Ibid.*, cf. Peirce 1903: CP 5.181, as quoted in Sebeok and Umiker Sebeok 1980: 27.

6. Using “retroduction” not in Peirce’s original sense but rather as Peirce contrarily used “induction” to refer to the testing of deductive consequences at an experiential level: see Deely 1982: 73 vis-à-vis 2009: 208–209 esp. note 4).

the testing of the hypothesis through its consequences (retroduction). Such testing, in turn, leads to further abductions. In experience, the three modes are distinct but not separate. As John Deely once delineated,⁷ these modes compenetrates and work in cycle, interactively constituting a spiral, so that this interpretive structure can represent historical interpretation, both that of an individual historian and that of a community of inquirers across the generations. So too, as Umberto Eco suggested (1983: 205–206), historical method can, in its turn, heighten understanding of conjectural procedures in general.

But for want of dialogue between historians and semioticians, the theme of abduction in relation to history remained underdeveloped among historians, aside from the fictive demonstration of it in Eco's first novel and, before that, R. G. Collingwood compared the historian's thinking to that of the detective. But Collingwood (mis)took the "fact-grubbing", "human blood-hound" approach of Sherlock Holmes with the more refined approach of the historian's use of "the little grey cells" in asking a dominating question that will turn the facts into evidence (Collingwood 1946: 281 *et alibi*).⁸ Yet Collingwood had at least posed the underdeveloped problem of the "logic of question and answer" of historians, of "how do all these things fit together?" The methodology the historian uses to establish historical facts on the basis of observation is not fundamentally different in method from the way a scientist establishes a working hypothesis (see Ricoeur 1955: 23). What distinguishes the two methods of inquiry is that history proposes to understand the action of signs within anthroposemiosis precisely as involving what is cognition-dependent but nonetheless objective, whereas the first concern of science tends toward the cognition-independent aspect of "facts".

With the illustrative detail that delights historians, Sebeok and Umiker-Sebeok (1979a) explicated this "method" of the detective in their marvelous essay comparing the approaches of Sherlock Holmes and Charles Sanders Peirce. Their essay shows that skillful detective work is far removed from "fact-grubbing". Once we situate the connection between the conjectural reasoning of the detective and of the historian within the context of semiotics, the classification of the logic of history touches base with – indeed, finds its home in – Peirce's view of abduction. We can now see the so-called "guessing instinct" of historians as predicated on Peirce's

7. Deely 1982: 72; 73, 9185a: 20, 1985b: 320–321.

8. See Williams 1985b: 277–292; Russell 1984.

point⁹ that this primary mode of reasoning “goes upon the hope that there is sufficient affinity between the reasoner’s mind and nature to render guessing not altogether hopeless, provided each guess is checked by comparison with observation”.

Thus, within the logic of semiotic, the logic of history, as a special case of conjectural thinking, falls under the same semiotic classification as scientific discoveries, medical diagnoses, and crime detections, whatever the various aspects of abduction involved within the conjectural procedures characteristic of each inquiry.¹⁰ The old question of whether history is an art, or a science, or a mediating discipline between the two, was never resolved by attempts to render history as “interdisciplinary” in a way that combines disciplines without developing the inner logic characteristic of each discipline. Yet it is resolved once history is seen to involve a particular aspect of logic – abduction – that is integrated within a semiotic perspective embracing the experiential spiral wherein abduction arises from retroductions derived from deductions themselves originally based on earlier abductions “in the first place”.

That evening in October, 1978, Sebeok himself had given me my first clue of the relation of semiotics to history, when, as it seemed to me as a historian, he magically had pulled from his sleeve the key to the logic proper to historical inquiry. He had revealed what the method of inquiry of historians is on its own terms – as well as in relation to other disciplines.

Part Two. Sebeok on the role of the observer: Case study of the historian

On a cool day in April, 2009, I sit in a warm study at the University of Tartu, Estonia, a study lined with glassed book cases containing Sebeok’s biosemiotics collection. I reflect on how Sebeok, as both linguist and biologist, envisaged the relation between culture and nature, within human experience. His vision creatively integrated together, in semiotic context, the work of the Estonian/German biologist Jakob von Uexküll and the Russian/Estonian semiotician Juri Lotman, the latter of whom is the easily best-known representative of the Tartu-Moscow school of semiotics. In his synthesis, tantamount to laying the basis for a whole

9. Peirce CP c1896: 1.121, as cited in Sebeok and Umiker-Sebeok 1980a: 24–25 (I am basing what I say re Peirce on Sebeok’s *own* reference to him).

10. See Bonfanti and Proni 1983: 128–129; Shank 1987.

new school,¹¹ Sebeok moved further in the direction of philosophically grounding what historians do in practice as a testing ground for the semiotics of history.

Granted that Sebeok had helped clarify the logic of abduction as applied to historical inquiry, wherein the historian can refer back to nature by way of the sign. The further question arises of the role of the historian as observer, insofar as the participatory observer and the mode of reasoning are part of the same semiotic predicament sometimes called the “hermeneutic circle”. This problem stands in the way especially of the historian’s claim to be “scientific” in practice. Sebeok, who was optimistic about reading the signs of nature, offered to historians a reference, as mediated by the sign, to mind-independent relations, however entangled with (for in the end there is no reduction to modern idealism) mind-independent relations.

But the problem remains, as well discussed for about a century, that no matter what be the erudition of the historian, or the self-reflexivity, or the integrity of the historian’s use of sources, the historian’s situation as observer remains unique among the disciplines. Whereas the deductive sciences construe their premises logically, and whereas the experimental sciences can observe their results, “the historian”, in Lotman’s lethal words (1990: 217, original emphasis), “is condemned to *deal with texts*”.

“Condemned”? Historians have indeed long conceded Lotman’s point (*ibid.*) that, on the one hand, in the experimental sciences a fact can be considered “at least in the initial stages as something primary, a datum which precedes the interpretation of it”. Hence a fact can be observed in laboratory conditions, as repeatable or subject to statistical study; by contrast, for the historian – as Lotman quite well couches the historian’s particularly precarious predicament – “the text stands between the event ‘as it happened’ and the historian” as after-the-event observer.

The further question of the role of the observer across the disciplines is central to semiotics. Indeed, for this reason, Sebeok arranged the Plenary Session on “The Role of the Observer” at the 1982 annual meeting of the Semiotic Society of America. He asked me to represent the unique case of

11. Particularly when considered together with the pioneering biosemiotic work of the Danish semiotician Jesper Hoffmeyer, by no coincidence named in 2003 the fourth “Thomas A. Sebeok Fellow” of the Semiotic Society of America. See Deely’s remarks (2009a: note 13) on this point; and especially the Appendix to Deely 2010: 95–97, “Sebeok’s Synthesis: the Tartu-Bloomington-Copenhagen School”.

the discipline of history (Williams 1982). In a statement to the panel participants, Sebeok (1982a) posed a key question that demonstrates his own broad conception of semiotics, inclusive of – but going beyond – the semiological tradition of literary and cultural focus within semiology. Whereas, in a strict sense, my own role as observer was to reflect on the semiotic predicament of the historian, in the wider sense of human history the semiotic predicament is that only through anthroposemiosis itself, in its prior relation to nature and constant involvement in generic zoösemioses, can humans know anything about the universe at all. As Sebeok himself posed the question in his statement arranging the “role of the observer” session:

The state of affairs I intend to begin with in my opening remarks will be based on the intuitive assumption that every active experience mandates the postulation of two components: (1) a world of *observed* “things” or “objects” among which are (2) *observers*. The mutual interaction between (1) and (2), or their correspectiveness, constitutes what many call *reality*. In the terminology of Jakob von Uexküll, the observing organism’s *Umwelt* and its *Innenwelt*, or its cognitive map of its environment and its inner model of reality, are correlative, that is, mutually determining.

The question I wish to pursue is the following: Can any observation be made without some disturbance to the system being observed? I believe that the answer must be no. This conclusion, which I propose to defend, has, in my estimation, very deep as well as far reaching implications for a whole array of disciplines, among which I intend particularly to explore some bearing upon certain questions in philosophy, biology, and modern physics (including especially evolutionary cosmology).

History as a discipline offers the most controversial case study of this crucial question, in the testing of the potential of the newer semiotically-derived paradigm that can intrinsically account for the theory and practice of this discipline in terms of the place and role of abduction within that spiral of semiosis that we know as “human experience”. Historians have long dreaded the implications of this question, ever since the theory of relativity first rocked the discipline – and the intellectual world generally. History had become professionalized, in the later nineteenth century, in a modern move away from its literary tradition on the basis of the “scientific” or “critical method” – itself based in turn philosophically on the “realist” paradigm of the detached “objective observer” – established as a paradigm for historical writing by the 19th-century German historian, Leopold von Ranke (esp. 1824a). Lotman (1990: 217) put his finger on

that sensitive nerve of traditional historians: “The historian not given to theorizing who concentrates on research into the primary material is usually content with Ranke’s formula of re-establishing the past ‘*wie es eigentlich gewesen*’ – as it actually was”.

How can a semiotician dialogue with such supposed “realist” historians, who are, at their best, masterful in their mode of reasoning, but anxious about any theory predicated on modern philosophical idealism, or on a glottocentric model of human experience that dismisses reference to semiosis relations *between* nature and culture? Does the discipline (of would-be “realist” history) itself stand “condemned”? From the standpoint of the developing doctrine of signs, Sebeok – however promising his revelatory contribution to historiography on abduction via Peirce – would have to clinch his own case with historians by transcending not simply naive realism but as well modern idealism. That is the way I saw the arduous task of re-conceptualizing the discipline of history in relation to the “major tradition” in semiotics (Sebeok 1979: 63), at the time a paradigm shift in the making (see Deely, Williams, and Kruse, eds. 1986).

“Sebeok sounds like another one of those modern idealists in so-called postmodern version”, my colleagues would say to me (as I recall the echoing of their voices in the corridors of history conferences): “Another one of those who would tell us that we historians create the event by our act of historical inquiry. Can’t he see that we historians are not so deceived that we cannot sometimes tell, through our ‘method’ of guessing he calls ‘abduction’, whether or not a document, or what you semiotists refer to as a ‘text’, was forged? Can he not see that, through our reading of signs, we can, with remarkable frequency, read relations between data in those past documents – or what you semiologists – or is the word now ‘semioticians’? – call ‘texts’ – that exist in themselves quite independently of our own act of observation and can refer back to something in the real world? Can he not see beyond his own illusions to the reality – yes, the *reality!* – that we can sometimes see through even our own illusions when the evidence itself counters our self-deception, or our preferred interpretation, or ‘constructs’?”

“I’d say that Sebeok would affirm what you do”, I would gleefully nod, “whether or not he succeeds to identify himself beyond philosophical idealism as a pre-existing paradigm”. The tension quite visibly dissipated on the faces of my fellow historians.

“Then”, said one of the more reflective historians in the group, “a genuine dialogue between history and semiotics might be possible. Granted that our ideas as historians are mental. But still, those relations the ideas incorporate can be signs of something independent of our mind – granted

that no one can see the relation itself in the historian's mind, since such a sign relation is invisible".

I raised my eyebrows at this surprising move in defining a sign. "What do you mean 'invisible'?", I asked.

"Well, I'm not quite sure", the colleague whose name I do not recall responded, "but" (as I recall the exchange, c.1985) "I'm going back to Carl Becker in the early part of the twentieth century. After all, Becker was at least an influential historian and President of the American Historical Association. So I feel comfortable with him as one of us, even though in his own lifetime he got the discipline into decades of debate over just such an idea. But he could at least see, whatever the accusations about his rejection of realism, that such a sign relation in the mind, even though it was not itself perceptible to the senses, could represent what was sense perceptible, such as, for example, dust on a crumbling old tome as signifying, say, the discipline of history itself. Such a relation in the mind, or mental idea that he called, back then, a mere 'symbol', which you would probably call a 'sign', could also represent what was *not* sense perceptible, such as the now proverbial unicorn. I guess he was a modern idealist even though he refused to label himself as one. Now what would Sebeok say about Becker's seeming-nonsense view of the sign itself as non-sense perceptible?"

"That is a good question he has himself had recently to rethink", I replied. "In so doing, he would have to concur with Becker, as well as with the philosophers Poinset, Deely, and Eco".

"This dialogue may be getting somewhere. But never mind those arcane Latin philosophers! Let's stick to Becker and Sebeok. We can at least all now concur that an object of our awareness, even though we cannot perceive it with our senses, can nonetheless exist independently of the workings of our own mind. After all, we historians need to distinguish between what exists only dependently upon our mind and what exists on its own independently of our observation of it".

"Indeed, we can so concur", I said, and added impishly: "In your distinction between mind-dependent being and mind-independent being, which the sign itself transcends, you sound remarkably like John Deely".

"Heaven help me! Please stick to Becker and Sebeok, before I go off the deep end into philosophy".

"But this philosophical tradition in semiotics is the direction Sebeok himself is taking, in practice for sure, as distinguished from his borrowing of Jakob von Uexküll's pre-existing paradigm of modern philosophical idealism, via Kant, wherein you can know only the workings of your own mind. Sebeok shows, with characteristic illustrative detail, how we

can indeed refer back to nature, but not in the naive reductive fashion dismissive of the singular role of relations as necessarily mediating between experienced objects and physical realities, as the so-called realists presuppose. Both Becker and Sebeok transcend realism and idealism as pre-existing paradigms.

“I still can’t get that move you semioticians make that sounds *neither* like idealism *nor* like realism. *Nor* does it sound like ‘semiology’, if taken as an exclusively linguistic model of human experience”.

“Becker himself can shed light, as a practicing historian, on that move”, I replied. “He is newly relevant in semiotic context in bringing together history and philosophy. I mean by ‘philosophy’ here semiotics itself as functioning as the integrating perspective that philosophy *used* to do. Speaking to you as a fellow historian, I say why should we bother with ‘abduction’ at all if semiotics denies that there is such a thing as an interrelation between nature and culture that is not at all simply in our mind? Can – or cannot – the historian as participatory observer know anything in nature, through the reading of signs?”

“That is the century-old question in our discipline”, commented my interlocutor.

“That is Sebeok’s own question”, I replied, “now in semiotic perspective. Let Becker continue to be our reference point as historians, in reflecting on Sebeok’s question. I think historians are on the right track, following Becker, about the being of a sign as prior to the division between being and non-being, or mind-independent and mind-dependent being, in its own proper being as a sign relation – although Becker used slightly variant terminology. By going back to Becker, we can better see how semiotics lends new meaning to his past thought in advancing historiographical discourse in semiotic perspective. Sebeok so well understood such new meaning as the semiotic instrument whereby we continually rewrite history with contemporary purpose”.

“But that semiotic perspective sounds more like philosophy – call it ‘semiotics’ if you like – than history! We historians are not first of all speculative philosophical thinkers”.

I took a deep breath in the face of this disciplinary road-block. “Let’s face it”, I finally responded, “Becker was a thinker in his own right who can be considered to be both a historian and a philosopher.¹² And you

12. See Hexter 1979: 18. For the debate in American historiography over the possible influence of Croce and Collingwood on Becker’s thinking, see Destler 1950: 503–504, Strout 1958: 44, and White 1971.

know that William Bouwsma (1981), as yet another President of the American Historical Association, is at the cutting edge of the discipline today; and he claims that there is no reason a *historian* can't be a *thinker* too. He goes so far as to say that history and philosophy should join hands in such a semiotic quest – that both disciplines need each other if we are to find, via the sign, a unifying perspective”.

“I think I get your point. So how would you, in your own words, sum up our discussion?”

“Let's just say that what Becker so long ago called a ‘symbol’ was only a triadic relation in the historian's mind among data, and this relation itself is in no way ‘sense perceptible’ (cf. Becker 1931: 234). To historians that sounded – and still sounds – like some form of idealism. Yet Becker would concur that physically existent dust collected on an old tome is a subject of existence independent of the role of the historian as observer, and that an object of awareness can also represent something other than itself in the mind of the historian. Nor need such representation refer to some existing thing, such as that dust. Thus, the triadic sign relation itself is not itself sense perceptible but, rather, prior to the division of being into ‘mind-independent and mind-dependent orders of being’ intertwined in objects of awareness given within experience through the mediation of the sign. The being and action of signs need be further clarified in semiotics, in the future, but this terminology in itself points to a new paradigm, semiotics as such. In our dialogue as historians we can see how these two orders of being commingle in what Sebeok terms ‘the “correspective relation” between nature and culture’.”

“Could you just humor me by telling me what Sebeok might say if some historian inhales some dust from some crumbling tome and comes down with an allergic reaction? I take it that Sebeok is not such a modern idealist as to say that such a reaction is all in the historian's head, as is the sign in the historian's mind!”

“My hunch is that Sebeok would suggest that the historian see a doctor who can detect the difference between a ‘sign’ as triadic relation and ‘symptom’ as sign-vehicle. Sebeok would reassure you that semiotics started with medicine in ancient Greece”.

“Now he sounds like a realist! Yet the problem remains: a historian can't be both a realist and an idealist”.

“Good point. You are really on to something. You need no longer be either one. Those are false options. Semiotics is a developing newer paradigm, quite postmodern as an alternative route for philosophy and, hence, for history. Like realism and unlike modern idealism, it affirms the

knowability of being as mind-independent. But unlike realism and like idealism, it also affirms the pervasiveness of social construction in our experience as including only partially mind-independent being.”

“Even so, I’m still confused as to whether the ‘doctrine of signs’, as Sebeok calls it, is a method, or a discipline, or a science, or a theory, or what? A perspective?”

“That’s another question for another time. I’m late for a session. Let’s discuss this matter further in special sessions on semiotics, at the annual meeting of the American Historical Association, as well as at semiotic conferences and in the pages of *Semiotica*.”

That earlier challenging question that Sebeok had posed, in 1982, for the panel on the role of the observer, indeed led to this opening dialogue between semiotics and history. He himself immeasurably helped cultivate such a development, not only with his organizational means but especially with his own approach of leaving each discipline duly to weigh and consider the question from the standpoint of the particular discipline’s own object of inquiry, now seen in relation to the sign itself as what every discipline presupposes.

A closer look at a key historian in relation to Sebeok’s quest

I have chosen the historian Carl Becker as a synecdoche of this opening dialogue, which I have addressed in monograph form elsewhere (Williams 1985a), because he especially well illustrates the philosophical finesse requisite to address what historians consider the pressing need for a new philosophical paradigm for the discipline of history. But before Sebeok’s own intervention in developing discourse between semiotics and history, Becker was, in retrospect, “past history”. Or was he rather, prospectively, a century ahead of his time and “doing semiotics”, as Sebeok would say, “without knowing it”, in a way that can help develop future thought across the disciplines?

That is the question. As a young historian, in 1910, Becker reveled in just the kind of question Sebeok raised concerning the role of the participatory observer. That year Becker published an article destined to become, by the 1930s, a dominant question in historiography: “What Are Historical Facts?” He argued that the “the facts of history do not exist for any historian until he creates them” (1910: 525).¹³ Historians, to be

contemporary, had to come to terms with the theory of relativity and quantum mechanics that concerned Sebeok in relation to semiotics. In his Presidential Address to the American Historical Association, in 1931, Becker, like Sebeok, took the cosmic view (Becker 1931: 234): “Being neither omniscient nor omnipresent, the historian is not the same person always and everywhere; and for him ... the form and significance of remembered events, like the extension and velocity of physical objects, will vary with the time and place of the observer”.

Becker distinguished the problem of the historian as observer from history as the relative past that once existed independently of the mind of the historian. The historian can observe, by way of some material sign (usually a written text, but also through architectural ruins, cemeteries, etc.), something of past actual events, even though there is no such thing as a detached observer observing simply a pre-jacent given. But since historians had predicated the professionalization of history on the detached observer model as proper to history as “scientific” in its “objectivity”, historians feared that Becker’s challenge to that paradigm, within the realist-idealist dualism of presupposed older paradigms, implied absolute skepticism, hence would lead to the dooming of history as a discipline.

Becker not only held his ground, but touched base with Sebeok’s stance on the semiotic function of human history. Becker went so far as to say that *if* a historian could, in fact, “restate” the sources without “reshaping them”, human beings could no longer function as historical beings (Becker 1931: 233), and human experience would therefore lose all signification as a future interrelation between present and past. Yet, according to Becker, as well as to Sebeok, humans alone on planet earth are capable of transmitting human experience as an editorial screening process whereby the present (that is, the future of the past, in relative time) continually

13. In the path-breaking 1930s, another renowned historian, Charles A. Beard (1933), pursued, in his Presidential Address to the American Historical Association and in his later landmark article, “That Noble Dream” (1935), the problem of the historian as observer in a refutation of historical realism. I focus here on Becker only because he was, in my view, especially sophisticated philosophically from an intrinsically semiotic standpoint. Yet Beard’s own words (1935: 76) dramatized the pressing future need for a new paradigm for historiography, in that he condemned “historical realism” as “one of the most sweeping dogmas in the recorded history of theories”, one which “condemns philosophy and throws it out of doors”.

generates new meaning of the past, in the sense that culture is regarded “historically”. In concluding his controversial Presidential Address, Becker insisted on the indeterminacy of all things historical. In his view, as in the view of the philosopher Jacques Maritain (1914: 17) – who considered Poincaré his teacher across the centuries – the past is still indeterminate in its final signification.

Insofar as Becker held that the future virtually influences the past, he moved historiography in the direction of what was to become John Deely’s arresting new formulation: “Thus signs work *as an influence of the future upon the present, so the meaning of the past is shaped by that influence of the future*”.¹⁴ I now suggest, for example, such virtual influence on future development of thought as bestowed by the present on a past resource, namely, the paper Becker presented in 1926 entitled “What is historical fact?” This paper took such a revolutionary point of departure from the historiography of that time that it was published only posthumously (1955). Another noted historian, Harry Elmer Barnes (1936: 70), wrote to Becker:

Regarding the unpublished paper’s potential fundamentally to reshape historiography: It may well come to occupy the same position in historical science that the new Physics does in natural science.

This relation between present and past as constantly reshaped by the future, in the time dimension of semiosis, brings into being the yet non-being of the future, which, in turn, in Becker’s intrinsically semiotic perspective, reproduces the past as a new creation, in order to remodel the world in relation to present human purpose, given cultural change. To say that the present produces the past, he points out, is no “paradox”. His central insight, in relation to Sebeok’s own contribution to historiography (as we will see further) is that since humans organize history from the standpoint of “present needs and purposes”, there is a screening process that continually goes on for purposes specific to the human species.

14. Deely 2008: 408, and 2009: 271 [emphasis his]. See Deely 2001: 49, where he first posits that, in relation to evolution, “in semiotic interactions there is an influence of the future upon the present and even upon the past as bearing upon the present”. He develops this foundational thought in relation to ethics and semioethics in Deely 2006 and further in 2008. Petrilli 2008 draws upon this theoretical viewpoint in addressing her own yet further question of how it might best apply to the practice itself of semioethics. Deely’s new formulation applies to discourse within women’s studies: see Williams 2008: 37

In Becker's words (1926: 37): "The past is a kind of screen upon which we project our vision of the future; and it is indeed a moving picture borrowing much of its form and color from our fears and aspirations".

In this dialogue with contemporary semiotics,¹⁵ Becker's breakthrough, as we have noted, treated the historical fact as a sign, or what he referred to as "only a symbol" (1926: 329, Becker's emphasis) that signified simply in the mind of the observing historian complex sign relations in the past texts themselves. In replying to modern realists (*ibid.*: 331), he argued regarding these mind-dependent relations, "Yes, in a sense, they are in the sources. . . . But in what sense?" Were there no observer to give a once mind-independent event signification, that event would cease to be "historical fact". The reason is that such a fact is itself *not* sense-perceptible and, as a "*representation*" (*ibid.*: 335, Becker's emphasis) is chosen from among possible data to signify what the observer intends, or "imposes" as signification in transforming the past from the vantage point of "present needs and purposes". Even then, most historians thought Becker right about the role of the historian as observer, but wrong about what seemed to them be his modern philosophical idealism in speaking of the sign relation itself as non-sense-perceptible.

The further implications concerning the historian's possible self-deception remains to this day, and will not go away within the new paradigm of semiotics. Sebeok well illustrated this problem, in his exposé of many marvels, including the chimp "language" experiments,¹⁶ which illustrate what Sebeok often referred to as the "Clever Hans Effect", or "Clever Hans Phenomenon", or "Clever Hans Fallacy", wherein we look in the destination for what we should look for in ourselves as the source, as in this famous case of a clever horse who appeared to learn mathematics, through the intended deception of no one. Sebeok, so characteristically of him, seized upon this seemingly magical example to pose yet further questions concerning the participatory observer in relation to semiotics. He suggests (1981: 260) that "the scope of the epithet 'Clever Hans' turned out to be very elastic indeed". It "evokes certain urgent lines of inquiry which continue to be neglected by semioticians, as well as most other students of human and animal behavior, at their peril" (1979: 87).

15. See also Pencak 1986 and 1993.

16. Sebeok 1979a: 84–106; Sebeok and Umiker Sebeok 1980: 21–25; Sebeok 1981; Sebeok and Rosenthal 1981. For a classic illustration in literature, treated in semiotic perspective, of looking in the destination for what we should look for in the source, see Hall 2008.

Within historiography itself, these lines of inquiry have been at once urgent and a central concern, sometimes called “historical presentism”. Yet this phenomenon, we now see, is intrinsic to the nature of historical inquiry itself in its re-writing of the past for present purposes in semiotically modeling the world in relation to the human species’ special interests in the existing present’s semiotic relation to the non-being of the future. Granted that the lessons of history tend to be more personal than the self-deceived historian may have intended. Nonetheless, the historian *in rerum natura* models history (in the practical order of being as what is traditionally called “moral philosophy”) according to what it could or should become. Historians are therefore especially attuned to the use of signs for the transmission and, in the process, transformation of history in the practical sense of modeling the world anew, by way of rewriting history, in the context of what Sebeok (1975: 149–188) called “the semiotic web”, as applied to a given cultural situation in a given time.

In this process, as Becker, too, pointed out, historians (and, I might add, philosophers, and so forth), however consciously or unconsciously, project such present needs and desires on our sources. He held that such sign relations thus selected, among myriad alternatives, are indeed there in the sources, but as mind-dependent, that is, as entirely dependent on being seen there anew by the mind of the historian. While such sign relations are not themselves sense perceptible, they do represent an interrelation between the orders of both mind-dependent being and mind-independent being. Thus, historians select such sign relations as “historical fact”, and submit such inquiry to a community of inquirers for confirmation of any given historian’s logical mode of inquiry, what we in semiotics classify as abductive logic.

In the earlier twentieth century, Becker found himself caught between realist and idealist paradigms, so his stance earned him, in semiotic perspective, the undeserved reputation of absolute skepticism philosophically. In want of the newer paradigm of semiotics, which can also, as could he on principle, refer back to nature in its interface with culture, Becker refused to defend himself against realist mainstream historians, much as in the 1930s did Collingwood with his statement (1939: 56) that:

anyone opposing the ‘realist’ was automatically classified as an ‘idealist’ . . . There was no ready-made class into which you could put a philosopher who . . . had arrived at conclusions of his own. . . . So, in spite of occasional remonstrances, that was how I found myself classified.

Sebeok, too, refused to defend himself against similar charges of solipsism (see the report in Deely 2003; also 2009: 183). Regarding his rethinking of the discipline of history from the standpoint of the mediation of the sign, Becker simply responded: “If this leads to absolute skepticism, then all I can say is that absolute skepticism is what it leads to”.¹⁷

Historians are, by discipline, the most visibly at the heart of this vital enterprise of modeling the world through language, in the time dimension of anthroposemiosis. The role of the observer, which Sebeok considered an urgent and underdeveloped question in semiotics, is at the center of the discourse in historiography. Yet until Sebeok himself had put that question forward, dialogue between historians and semioticians (as distinguished simply from semiologists) was virtually non-existent among historians in America.

Synthesizing Sebeok’s semiotics of history

In a nutshell, Sebeok’s contribution to the semiotics of history, both in itself (within semiotics) and in relation to the discipline of history, consisted in his posing the questions that opened dialogue between the Poinsett-Locke-Peirce tradition in semiotics and mainstream historians. He brought to the fore the role of abduction in the logic of history, and the participatory role of the observer. Furthermore, he confirmed independently Becker’s own direction for the potential future of historiography, given Sebeok’s own insight that only human beings can use signs to rearrange through language the relevance of the past in relation to the present and future in an indefinite number of alternate ways.

In his semiotics of history, Sebeok held (1979: 29) that this capacity of the human mind derives “not so much from the emergence of language as from the capacity for assuring [human] homeostasis by means of a two-track mechanism for information collection and storage, both of which are securely transmissible”. Whereas many animals have memory systems in addition to their genetic systems, only humans have a *history* of collected and stored information. As a noted historian once put it (Commager 1965: 3), history is “organized memory”, in precisely the sense that the organization itself is “all-important”.

17. Cited by Smith 1956: 43, from an unpublished manuscript.

Sebeok (1987, 1988) would further develop this thought, from his linguistic and biological point of view, in arguing, beyond the impasse of realism and idealism as pre-existing paradigms, that language is indeed not first of all a means of communication, but a means of modeling the world inseparable – even as species-specifically human – from the generically animal character of an *Innenwelt* (Sebeok 1984a, 1988; Deely 2007). Consequently, only when we translate things of the once-existent past into objects of awareness, as the historian Carl Becker had argued earlier, can we intelligibly represent them through abductive logic, that mode of reasoning that, as we have seen, historians actually use in the practice of history.

Sebeok's semiotics of history ultimately rests on his own intellectual vision of the semiotic transmissibility of experience at the level of culture – what we call “history” – that refers back to the nature that it presupposes. Such a point of departure moves beyond the historic impasse of pre-existing philosophical paradigms that failed to account for the semiotic anomaly of what historians do. His semiotics of history, rather than visiting upon history the restrictive linguistic or philosophical paradigms of modernity, opens onto the horizon of human “history” as coextensive with anthroposemiosis itself. He reminds us that the human animal is that “minuscule segment of nature” that is ever-changing the semiotic reality of the “present” in relation to the “past”, in forging an indeterminate future through language, across all specializations.

Part Three. Sebeok envisioning semiotics: History in the making

Sebeok's prospective view of history

Here in Tartu I touch base with the same books, in wall-to-wall glassed book cases of the Thomas A. Sebeok Book Collection, that I used to see on the shelves of his study in his home in Bloomington, Indiana. As a historian I see, more personally on the soil of Estonia, how he integrated both the work of Juri Lotman and Jakob von Uexküll within the purview of semiotics.

Both Sebeok and Lotman challenged the usual “retrospective” view of history, wherein the past is determined, said and done, without leaving room for possible alternatives. Such a retrospective view, as Lotman insightfully expresses it (1990: 230), “inevitably leads to the conclusion

that what actually happened is not only the most probable but the only scenario possible". He starts from the premiss¹⁸ that human history is "always the result of one of many possible alternatives".

What seems so clear now as "historical fact" about Sebeok's direction for semiotics was at that time still history in the making, wherein he himself proceeded sometimes by the light of night in choosing the alternate way opened by the sign. My historical review here will look back at the past, rather than forward to the future, wherein I respect the boundaries of my own discipline. At the same time, such a look at history continues to lend new meaning in developing present and future thought, which you as reader might bestow upon such thought of the past.

I arrive to the place where I started, in my continued exploration of semiotics, as if to know the place for the first time,¹⁹ that day in 1973 when I had first encountered Thomas A. Sebeok, and when I had hoped to find Poinot in book exhibit, before I was aware that "the time had not yet come". Yet, as we have observed, Sebeok took a prospective view of history, and that is why he, like a hound dog, pursued the retrieval of Poinot as pivotal to the major tradition in semiotics. I was not one of those who had waited so long to read it that Umberto Eco, in 1983, drew a cartoon of fifth millennium spacemen celebrating its "long-awaited" publication.²⁰ In that day before electronic copy, as my introduction to semiotics, Deely had handed me, as a Maritain scholar, the massive unpublished manuscript of his edition of Poinot 1632. Four years later, heralding that still future event in his Foreword to Deely's *Introducing Semiotic*, Sebeok (1982: x) proclaimed that Poinot's thought, in the development of the major tradition of contemporary semiotics, "belongs decisively to that mainstream as the 'missing link' between the ancients and the moderns in the history of semiotic, a pivot as well as a divide between two huge intellectual landscapes the ecology of neither of which could be fully appreciated prior to this major publishing event".

I turn back the clock (in this spiral of semiosis, lending new meaning to the past) to the place where Sebeok, as a graduate student in 1943, first encountered John Poinot indirectly, through Jacques Maritain, whose

18. Here following Peirce's 1902 admonition on the spelling of "premiss" as pertaining to logic, in contrast to "premise" as a piece of real estate, discussed in Deely 2001: 88n65.

19. Allusion is to T.S. Eliot 1942.

20. Now reproduced to open the Introduction in Copley ed. 2009.

face appears in the center of the cover of Sebeok's *Semiotics in the United States* (1991). Sebeok recalled that Maritain, as a "septuagenarian", then a "sexagenarian" (1982–1973), invited him, with Maritain's "customary graciousness on a stroll one morning in 1943". As Sebeok tells the story (Sebeok 1991: 39–40):

He inquired about my studies during that walk. I responded by telling him something about my growing desire, instigated by Morris and reinforced by Jakobson, to explore the doctrine of signs, especially verbal. That appeared to engage his interest. He asked me if I had read "Jean" Poinot, a name that meant nothing to me. He then admonished me – as I later recounted in a piece in the *Times* (Sebeok 1986) – to pursue the *Cursus Philosophicus* of 'the profound doctor' Poinot. I am sure I heard the name Poinot for the first time in the streets of New York that day.

Yet, Sebeok recalled (*ibid.*: 40), "All this chitchat . . . meant little to me then. It fell into place only some fifteen years afterward, in the context of reading Maritain's 'Language and the Theory of Sign' (Maritain 1957). . . . It provided the key me to our conversation back in 1943. . .". Maritain, through Poinot, had "struck to the heart" of the noetic mission of semiotics, as Sebeok (1991: 40–41) quotes the outset of Maritain's essay:

No problems are more complex or fundamental . . . than those pertaining to the sign. The sign is relevant to the whole extent of knowledge and of human life; it is a universal instrument in the world of human beings, like motion in the world of physical nature.

Sebeok reflects (1991: 42):

Now that I myself have turned septuagenarian, I wish I had grasped Maritain's credo sooner and better, for I have become convinced that the tradition in which he labored mutually harmonizes with and enriches what I have elsewhere termed (1979: 63) the 'major tradition' in semiotic studies.

Why Sebeok considered Poinot such a pivotal retrieval in contemporary semiotics well illustrates both Lotman's point in relation to human history, as well as Deely's, and – last, but not least – my own view as a practicing *historian*. As Lotman (1990: 230) put it, in consonance on this point with Sebeok, surrounding those events of the past are "clusters of unrealized possibilities" or "missed opportunities".

In redefining historical periods precisely by thematizing such unrealized possibilities, Deely (1986: 406–407) himself points out that “only when and if a theoretical perspective is understood in its own terms can it also be related to, and further understood in the light of, its predecessors and progeny”. Prior to that development, we have not the historical vantage point “to say what we are seeking forerunners of and successors to” (*ibid.*). Semiotic historiography is thus the same process as the historiography that historians practice (be it self-reflexively or non-self-reflexively) in laying hold of the historiographical process itself as the most potent way to define and to develop intellectual projects such as semiotics.

Historical narrative, as I once put it (Williams 1987a: 480), is “capable of situating competing traditions and incommensurate paradigms in a perspective that . . . decides which paradigms will emerge as victorious”. From the vantage point of the present, I illustrate this historiographical phenomenon by way of specific past reviews of Sebeok’s seminal *Contributions to the Doctrine of Signs* that are newly relevant for the future. I was then, as I am now, a participatory observer in constructing these reviews as historical texts. Back then, Sebeok himself asked me to do just that, in requesting that I, as historian, write the prefatory essay “Challenging Signs at the Crossroads” (Williams 1985) for the reprint of his *Contributions to the Doctrine of Signs* (original ed. 1976, corrected reprint 1985). He handed me three book reviews that he considered especially significant regarding his own vision of semiotics for the future, and we are now in that future.

Sebeok, true to form, in this book had posed questions intended, he said (1976: 156), to give a “foretaste of the shape of debates in the decades to come”. This book showcases Sebeok’s way of seeing beyond existing intellectual vistas toward an inherently unified approach to human knowledge, in both its speculative and practical dimensions, as mediated by the sign. Such an inherently interdisciplinary possibility had not yet been realized, but, in his vision for semiotics, it could come to be realized.

The direction in which Sebeok chose to cultivate this future possibility was the prospective one of seizing upon the past semiotic tradition of Locke and Peirce (and what soon became the Poinsett-Locke-Peirce tradition in semiotics). To describe the status of semiotics, Sebeok deliberately used the term “doctrine”, in Locke’s sense of a system of principles constituting a department of knowledge, itself an echo of the term “doctrine” at play throughout the Latin development of semiotics as well, in preference to the terms “theory” or “science”. This choice of Sebeok’s quickly

found its way into the general discussion.²¹ In so defining semiotics, he cautioned against claiming too much – or too little – for semiotics at that time (1976: 64): “Today, semiotics lacks a comprehensive theoretical foundation but is sustained largely as a consistently shared point of view, having as its subject matter all systems of signs irrespective of their substance and without regard to the species of emitter or receiver involved”.

Sebeok exemplified a rare sense of detachment from taking too seriously debates of a passing fashion. Instead, he saw the level of abstraction to be achieved as “precisely the challenge of semiotics” (*ibid.*). He later went so far as to claim that the scope of semiotics should be viewed as co-extensive with life itself (1976: 69). He had expanded semiotics not only beyond an exclusively linguistic model of human experience, but also toward that still mysterious frontier, according to Peirce’s hunch (1906: 5.448n, as quoted in Sebeok 1976: 176), that “all the universe is perfused with signs, if it is not exclusively composed of signs”. Since semiotics originated as an observational science, with the aim of finding out “not merely what is in the actual world, but also what must be” (Sebeok 1976: ix), he held steady in his direction that the level of abstraction required to unify semiotics is still but a possibility to be someday achieved.

Historical review of reviews: Sebeok’s contributions to a doctrine of signs

In a short, pithy review, one that Sebeok told me he highly valued for its perceptive insights concerning the state of the art, W. C. Watt (1978: 714–716) credited Sebeok as contributing substantively to the pressing need of that time to establish a firm philosophical foundation for semiotics, as well as for its direction for the future, in his scientifically grounded territorial claim for the inclusion of the genetic code within the purview of semiotics as “endosemiotics”. What is especially relevant, it seems to me, concerning Sebeok’s own vision and direction for semiotics, is Watt’s own critically cautious confirmation of Sebeok’s consolidation of the field. This field was at that time so ill-defined in its boundaries as to appear to critics as at once “so broad and so thin” as to be “fishy”. Yet, according to Watt, Sebeok had actually succeeded, in his contributions to the doctrine of

21. See the terminological entry (Deely 1986a) for the *Encyclopedic Dictionary of Semiotics*, ed. Thomas A. Sebeok, Paul Bouissac, Umberto Eco, Jerzy Pelc, Roland Posner, Alain Rey, and Ann Shukman (Berlin: Mouton de Gruyter), Tome I, p. 214.

signs, in *broadening the field still further*, awaiting only “a solid body of empirical work”.

Watt concluded that “Few, I think, will want to broaden semiotics still further”. The question arises, in the present century, just how far Sebeok might go, as a scientist awaiting further empirical work concerning a possible “final frontier” of semiotics. We can ponder the posing of that now hypothetical question in relation to Sebeok’s own critical openness, as both linguist and scientist, to advancing discourse of both cenoscopic and ideoscopic knowledge, as I will now further illustrate.

I turn to the two much longer and disputatious reviews that Sebeok placed in my hands. These were reviews by Paul Bouissac (1979) and John Deely (1978), reviews which likewise function as ‘semiotic markers’ in relation to Sebeok’s contribution to history broadly considered. Neither reviewer knew before publication what the other reviewer had said. Sebeok himself quite well realized – as we have already seen in his posing the question of the role of the observer – that he could expect both reviewers as observers and an observing historian to affect, in some indeterminate way, what each of them observed; and, as it seemed to me, he looked forward to the outcome of the mystery of this indeterminate historical process as something that might thereby influence the future of his own thought.

The two reviewers, in some crucial ways, were so at odds as to what was the supposed “direction” in which Sebeok was taking – or ought to take – semiotics that, in my play of musement, I saw both reviews as indexical of Sebeok’s own expansive view that was inclusive, even welcoming, of such cognitive dissonance. I marveled at his own intellectual virtues, including his intellectual integrity, intellectual justice, and intellectual humility, as well as his intellectual perseverance and openness to reason. Would he chose ultimately to close down new frontiers in semiotics, in his move toward a more unified view, in the future, of the doctrine of signs? Sebeok himself, I concluded, might clarify his stance, if he could be interpreted as arguing, according to one reviewer, for a science of signs in a strictly empirical sense, and, according into the other reviewer, for a doctrine of signs that would unify the sciences and humanities.

Here I represent these two competing interpretations of Sebeok’s contribution to the doctrine of signs as exemplifying Sebeok’s own intellectually open thinking, wherein he carried an insight as far as he could, in relation to yet another insight that actually militated against it, in theory. He had a keen sense of what the pre-semiotic figure, Jacques Maritain, would call the “central intuition” of an opposing view. Sebeok

would grasp that first, before dismissing any theory as a dead-end for the future of semiotics.

Paul Bouissac, in his review (1979: 207), implicitly argued for exactly a “science of signs”, rather than a “doctrine of signs”, as the intended direction of Sebeok’s own contribution. Yet the title of Sebeok’s book semiotically keys us to expect that he envisions the future of semiotics as a “doctrine” of signs. This reviewer interprets the title to denote no more than the current state of the art of semiotics, one that is not yet a science but will become a “normal science” in the future. Sebeok’s own text (1976: ix) lends credence to this interpretation:

The expression doctrine of signs . . . was selected with deliberation to emblematically align the arguments embodied in these eleven essays with the semiotic tradition of Locke and Peirce rather than more closely with others that prefer to dignify the field – often with premature strategic intent – as a ‘theory’ or even a ‘science’.

Sebeok, as a scientist, at that time (1976: xi–xii) identified his direction of semiotics as integrating the ideas of René Thom to the whole field of semiotics, thereby for the first time technically satisfying Peirce’s criteria for semiotic as an observational science. Sebeok indeed suggested, as “bound” to happen, that semiotics could develop in the future into a science of signs, as a “normal science” for all branches of semiotics, through a paradigm shift in “in Kuhn’s sense” (*ibid.*: ix). What then would become of semiotics? According to Sebeok, “much of what we call semiotics today, including notably linguistics, will become superfluous (*ibid.*: 32).

I myself wondered would then become of history or philosophy if, according to Bouissac’s interpretation of Sebeok’s vision for semiotics, the “obvious conclusion” is that semiotics can be successfully founded only when all its theoretical claims can be circumscribed by “empiricism and falsifiability” (Bouissac 1979: 211). I mused (Williams 1986) whether Sebeok would be willing to narrow the semiotic perspective to the prerequisites of ideoscopic, or empirical research alone. Clearly, a move in that narrower direction would have been problematic for what Sebeok called (1984: 2) the “full panoply”, the “all-encompassing range”, of the “semiotic adventure”, the adventure which he himself found so challenging. After urging that neurobiology promises to be of “burning interest” to semiotics, Sebeok continued to envision the future of semiotics as integrative of all the disciplines – given that the sign mediates all knowledge – with full regard for the logical methods of each discipline, the cenoscopic

knowledge of historical research included as alive and well. His great hope for the future manifests itself in his own impassioned historiographical consciousness (*ibid.*). He recalled this very passage, with a renewed plea for its fulfillment in the future, in his last book (2001: 7):

A comprehensive history of the vast semiotic adventure remains to be recorded in its full panoply. A feast so all-encompassing in range can only be achieved if we all collaborate. The monumental archive will begin, as it must, with medicine, continue with philosophy in all its labyrinthine ramifications, of which logic will be but one vital artery. The extension into linguistics . . . and the elucidation of the language dependent arts will occupy a relatively superficial stratum. . . ; and the same can be said of the rest of the so-called "semiotics of culture" (using this entrenched cliché broadly and loosely).

Bouissac persuasively argued for his more restrictive interpretation of Sebeok's vision, in relation to Bouissac's own pre-existing positivist paradigm, which was intrinsically a-historical. In his questioning (1981: 9) whether there are "some crucial truths hidden in Augustine, Poincaré, Peirce or Hjelmslev", Bouissac held that, in this age of specialization, exploring historical roots of older models for research can "sterilize research and curtail innovativeness". He claimed, quite rightly in retrospect, that "Semiotics is indeed at a crossroad". He concluded categorically, in relation to Sebeok's *own* viewpoint on the semiotic function of history and philosophy, that "Some of the paths are definitely dead ends".

I concluded at that time (1985: xxv1) that Bouissac's a-historical frame of reference was "essentially asemiotic insofar as it loses sight of precisely the *semiotic* relation between past and present traditions, from which all sciences advance, even a science of signs".

Now I turn to the third review, by John Deely (1978), thirty pages long, published in *Semiotica*. According to him, he had expressed his reservations about submitting such a long review, but Sebeok replied, so characteristic of his stance as an editor: "length is of no consideration". We recall that after reading the three reviews, he saw them, taken together, as semiotic markers of the historiographical process of defining semiotics for the future, which is why these past texts have new relevance in the present.

As I have already shown, Sebeok had a keen appreciation of the essential contribution of both history and philosophy to the developing doctrine of signs. In the pages of Sebeok, Deely (1978: 155) read not the restrictively proposed science of signs Bouissac had hoped would eventually

obviate historical and philosophical inquiry, but, precisely, a doctrine of signs to be achieved at the level of abstraction that could accommodate what Sebeok himself saw as the challenge of semiotics, namely, to account for the entire spectrum of sign activity, as inclusive of its anthroposemiotic, zoösemiotic, and endosemiotic realizations. Such a level of abstraction could be achieved, Deely later argued (1982: 127), according to “a level or type of knowledge” which is “critically distinct from scientific knowledge or science (‘scientia’)” in the modern sense, as also distinct from the term “theory”. Locke’s own usage of “doctrine”, which Sebeok himself borrowed, “referred”, Deely clarified (*ibid.*: 156), “to a body of thought sensitive to its own implications at a level beyond what can be empirically circumscribed in unambiguous ways”. He thereby made historically and theoretically explicit the distinction between a “science” and a “doctrine” of signs, which Sebeok’s own text had left ambiguous in principle.

Bouissac had constructed the “crossroad” for semiotics as a choice in direction between the two paths, a “science” of signs, or a “doctrine” of signs. The narrower positivist direction would have perpetuated the historic divide of knowledge into the scientific and humanistic modes of knowing, whereas the broader vista toward a doctrine of signs can, for the first time inherently, account for the logical relation of one discipline to another by revealing their common roots in the sign, which is foundational to all human knowledge.

Which way would Sebeok himself take at this historic crossroad? In 1984, the defining moment had arrived, at a “State-of-the-Art” Research Conference, October 8–10, held at Indiana University, Bloomington. Bouissac (in Gardin, Bouissac and Foote 1984) presented a position that envisaged Sebeok’s own direction for semiotics as predicated on “the scientific constructs compatible with the tenets of logical positivism”. In turn, Deely (1984) presented his view of what was “really new” about semiotics, as a “frame of reference”, or a “perspective” (the first time he defined semiotics using that specific word), in which “the sign is seen to mediate knowledge over time (*eo ipso* historically)”, irrespective of logical methods characteristic of a given discipline.

In contrast to Bouissac’s stance, Sebeok and Deely both took a prospective stance on the semiotics of history, with its creative potential in the context of contemporary semiotics, as revolutionary. After the test of a quarter of a century, I can surely construct, as “historical fact”, that Sebeok’s own direction for semiotics, at this crucial crossroad in the history of semiotics, aligned with Deely’s claim (*ibid.*, emphasis mine):

The rise of semiotic consciousness today seems to me to be *absolutely revolutionary* respecting the past of philosophy and science alike. It is at once an antidote for the unbridled and atomizing specialization of academic pursuits that science has brought in its wake, and *a restoration of historical thought to its properly central place in humanistic inquiry*.

That same year, Sebeok indeed clarified his own vision and direction for semiotics. He co-signed that collaborative “Position Paper” (Anderson et al. 1984; in conversation Sebeok always referred to this document as a “Manifesto”) that not only absorbed semiology into the wider perspective of semiotics, but unified philosophy with history in positing that semiotics concerns itself with the “matrix”, as Deely put it (1986: 407, emphasis mine), of all the disciplines and is “unique as a perspective in revealing the *centrality of history* to the enterprise of understanding in its totality”.

Parallel quest within the history discipline

In my historiographical review here of this union of philosophy (as semiotics) and history, in relation to Sebeok’s own *developing* understanding of semiotics, I now further interweave essential strands of the parallel quest within the history discipline itself about the direction of history after the “linguistic turn”, a quest which Sebeok considered quintessential in developing the doctrine of signs.

A noted intellectual historian (Toews 1987: 906), in the pages of the *American Historical Review*, posed two “pressing needs” for the state-of-the-art of history. The first need required the rethinking, with “the same critical intensity and sophistication” heretofore addressing the glotto-centric model accruing from semiology, the role of signs in relation to experience, as precisely the philosophical ground on which the discipline of history rests. The second need required a *perspective* that can indeed account for continuities that join historians of diverse orientations, across generations, in a “common enterprise” (ibid.: 906–907). The “critical question” that Toews himself posited to professional historians was whether a paradigm shift in “*perspective*” had indeed occurred, one “that impinges on all the disciplines” and “provides the basis for a genuine interdisciplinary dialogue” wherein “intellectual history will have a distinctive voice”.

I was strolling along with Sebeok and a few other friends after a lunch, one day in Bloomington, Indiana, when I casually mentioned these very

words of Toews, which were hot off the press. Since that October day in 1978, when he had once asked me, at my first conference in semiotics, with that eagerness of a dog offered a bone, “What’s a *historian* doing *here*?” I had, in due course, replied at length, as Sebeok well knew (Williams 1985a, 1985b); so on this occasion Tom took Toews’ words as but a trifling detail, and he responded simply: “I suggest you guest edit, with William Pencak, since you are both intellectual historians, a Special Issue on History for *Semiotica* (Williams and Pencak 1991), addressed to Toews’ very question”. His suggestion reveals how his intellectual vision worked, with his hound-dog nose, in collaborative enterprise toward developing the inherently interdisciplinary perspective of the Poinset-Locke-Peirce philosophical tradition in semiotics.

This convergence of semiotics and the history discipline well illustrates the paradigm shift that Sebeok pursued beyond glottocentrism, in his move from *semiologie* to *semiotique* (see Sebeok 1971: 261). Such a convergence moved away from a tendency to approach the sign (à la semiology) on the basis of some pre-existing paradigm, toward what John Deely had first called, in 1984, a “semiotic perspective”, so that semiotics might itself become a new paradigm, in redefining philosophical tradition.

If, given the test of time, semiotics is indeed, as Deely still claims (2001), based now on his redefining of philosophical tradition, so revolutionary a perspective, then I, as a member of a discipline known to be the most cautious about absolute claims for the future, am in good company: William Bouwsma (1981), as a leading historian, welcomed the possibility for the future that history and philosophy, if “transformed” in the perspective of the sign, under such “new” conditions might again “join hands”. He had high hopes that philosophy, in late modernity one of the least historically-minded disciplines, might collaborate with history, “one of the least philosophical”, in this new *perspective*.

A more specific question now arises, by way of clarification, in relation to Deely’s review of Sebeok as well as to my interface here with the historian Carl Becker. We have already seen the remarkable *continuity* between Sebeok and Becker regarding the role of human history and the role of the historian as observer. Indeed, we would never have seen the new relevance in semiotic context of Becker’s past thought, had Sebeok not elicited such historical inquiry. The further question regards a remarkable *discontinuity* between Sebeok and Becker that turns out to be crucial concerning the nature or being of signs. Becker (1926: 329), we recall, in his reply to realists, insisted that the relations between data in the mind of the historian are “representations” (*ibid.* 335) that are, as such, not sense-perceptible. Of

course such “nonsense” rankled traditional historians, who might point to a “sign” that was obviously sense perceptible, such as the unimaginative but classic example of a stop sign.

In order to situate, intertextually, this discontinuity between Sebeok and Becker, I turn again to Deely’s review (1978) of Sebeok’s own claim. The question concerns Sebeok’s incorporation into the definition of a sign of what Deely then termed in his review (1978) an “unnecessary” or “alien element”, namely “the element of sense perceptibility”.²² Although Sebeok himself had held this element to be essential to the nature of the sign “by all accounts” (1976: 37), in his response Deely clarified (1978: 168) that if relativity itself “constitutes the being proper to signs”, then why “add the further condition that this relativity has to be grounded in sense as such?” Here is a further example of the interplay of Sebeok’s own inquiry with advancing discourse between philosophy and the discipline of history.

Envisioning the future of semiotics: Past and present

I return to where we began these reviews, to Watt’s review, now in relation to Deely’s review. We saw that Watt had welcomed Sebeok’s extension of the phenomena of signification to include the genetic code itself in the new field of “endosemiotics”, in his broadening of semiotics beyond which few would want to venture further. We saw, too, that Sebeok, within a few years, collaborated with Deely and others in broadening the territory of semiotics indeed yet further, as co-extensive with life. Yet earlier, in his review of Sebeok’s *Contributions to the Doctrine of Signs*, Deely himself (1978: 168) had challenged Sebeok’s vision for semiotics: “What are we to say of this grand view? Basically, in my judgment, we must say that it is too grand, not in the sense of over-ambitious, but in the sense of actually erroneous”.

Deely advanced as the core of his argument (*ibid.*) that “signs, properly speaking do not exist as such outside of cognition, and, within cognition, signs as such stand outside the order of efficient causality – as genes emphatically do not”. He cited Latin sources as well the contemporary semiotician Umberto Eco (1976: 32–33) in support of this viewpoint. I

22. See also concurrence of Eschbach and Trabant 1983, Doyle 1984, and Eco 1984.

pass over the disputation of these learned men regarding what Deely then thought (1978: 169) had “mised” Sebeok, “apart from the ever-seductive lure of arriving at a unified scheme for the whole of things, such as Einstein died still dreaming of, or Teilhard in his own way sought in evolution”. Such is the indeterminacy of history that the earlier Deely confidently concluded (1978: 169–170), from his more restrictive point, that “the true situation” is that “the dynamics of semiosis properly speaking are not co-extensive with the dynamic of life as such, but only with the dynamics of cognitive life”. It followed, according to Deely, that Sebeok’s “endo”-semiotics is “best left off as pseudo-semiotics”.

A few years later Deely (1982a) made “some broad-gauge” adjustments, not of his reservations within his former “strict” perspective (wherein he drew the line at cognition), but of the perspective itself. He said he had “criticized sharply” Sebeok’s more expansive vision because he had considered it “excessive and pregnant with the kind of imperialism likely to discredit the semiotics movement” especially among academicians “neutral but open-minded about whatever possibilities semiotics might prove to offer”. What had started out as a dialogue with Deely vs. Sebeok, turned now into Deely vs. Deely.

Such is the indeterminacy of the development even of a single individual’s thought that Deely later, beginning in 1990 (*Basics of Semiotics*, Chap. 6), has argued for the possibility of a semiosis at work even before life. In the concluding chapter of the latest (the 5th expanded) edition of *Basics of Semiotics*, Deely conjectures “why Sebeok’s final view of semiosis as co-extensive with life is not broad enough” (2009: 258):

This brings me to the nexus, the crucial node, of the musement I am placing before you with this essay . . . when Sebeok notes²³ that ‘life modifies the universe to meet its needs, and accomplishes this by means of sign action’, while feeling at the same time “strongly drawn to Wheeler’s suggestion²⁴ that the fundamental physical constraints, the nuclear and cosmological parameters, and others, are constrained by the unbudging requirement that life evolve”, is he not suggesting without realizing it that the development of the physical universe prior to the advent of life was itself a product of semiosis, even if that prior development, as Peirce suggested,²⁵ cannot be fully revealed or brought to light by the sign alone, as such.

23. Sebeok 1984: 21 [as referenced in quote]

24. Cf. Wheeler 1977; also Whitaker 1988, and Barrow, et al. 1988 [as referenced in quote].

25. Peirce c. 1907: EP 2.404 [as referenced in quote].

However future thought might develop, we can see that Thomas A. Sebeok's own broad vision and direction of the semiotic adventure developed dynamically. He himself (1986a) once entitled such development: *I Think I Am a Verb: More Contributions to the Doctrine of Signs*. We have seen how his own work moved beyond pre-existing paradigms, which had concealed as much as they revealed of his own broad view. While we cannot see for sure, until the end of time, where semiotics is going, I muse, as a historian, at the mystery of how the future will bestow new signification on his past contributions to both the semiotics of *history* and the history of *semiotics*.

References

- Anderson, Myrdene, John Deely, Martin Krampen, Joseph Ransdell, Thomas A. Sebeok, and Thure von Uexküll
1984 *A Semiotic Perspective on the Sciences: Steps toward a New Paradigm* (Victoria College of the University of Toronto: Toronto Semiotic Circle Publication Series, No. 5), subsequently printed with minor additions and under the same title as a "Position Paper" in *Semiotica* 52-1/2 (also 1984), 7-47.
- Baer, Eugen
1987 Interview with historian Brooke Williams (October 24), at the Eleventh Annual Meeting of the Semiotic Society of America, in regard to earliest years of this Society.
- Baldwin, James M., Editor (1861-1934)
1901-1902 *Dictionary of Psychology and Philosophy*, "giving a terminology in English, French, German, and Italian. Written by many hands and edited by J. M. Baldwin", in 3 Volumes, Vol. 3 being a Bibliography of Philosophy, Psychology, and cognate subjects compiled by Benjamin Rand (original ed. New York: Macmillan; vols. 1 and 2 reissued by Peter Smith, New York, 1940, vol. 3 1949).
- Barnes, Harry E.
1936 Personal Letter to Carl Becker dated March 21, as quoted in Charlotte Watkins Smith, *Carl Becker: On History and the Climate of Opinion* (Ithaca, New York: Cornell University Press, 1956).
- Becker, Carl
1910 "Detachment and the Writing of History", *Atlantic Monthly* CVI (October), 534-536.
- Becker, Carl
1926 "What is the Historical Fact?" Paper read at the 41st Annual Meeting (December) of the American Historical Association at

- Rochester, New York, subsequently published 19 years later as “What Are historical Facts?”, *Western Political Quarterly* VII (1955), 327–340.
- Becker, Carl
1931 “Everyman His Own Historian”, *American Historical Review* 37, 221–236. Reprinted in Carl Becker, *Everyman His Own Historian* (Chicago: Quadrangle, 1966), 233–255.
- Bonfantini, Massimo A., and Giampaolo Proni
1983 “To Guess or Not To Guess?”, In *The Sign of Three*, ed. Umberto Eco and Thomas A. Sebeok (Bloomington: Indiana University Press, 1983), 119–134.
- Bouissac, Paul
1979 “A Compass for Semiotics” (review of Sebeok 1976), *Ars Semeiotica* II: 2, 205–221.
- Bouissac, Paul
1981 “Figurative vs. Objective Semiotics”, in *Semiotics 1981* (Proceedings of the sixth Annual Meeting of the Semiotic Society of America), ed. John N. Deely and Margot D. Lenhart (New York: Plenum, 1983), 3–12.
- Bouwsma, William J.
1981 “Intellectual History in the Eighties”, *Journal of Interdisciplinary History* XII.2 (Autumn), 279–291.
- Bouwsma, William J.
1984 “A Program for Semiotics”, presented by Paul Bouissac on October 10 to the “State-of-the-Art” Research Conference held at Indiana University, Bloomington, October 8–10. He had circulated this Program for signatures June 15, 1984, at the Toronto ISISS 84, subsequently published under the same title as a “Guest Editorial” in *Semiotica* 52–1/2, 1–5, and also presented by Paul Bouissac on October 10 to the “State-of-the-Art” Research Conference held at Indiana University, Bloomington, October 8–10.
- Cobley, Paul, Editor
2009 *Realism for the 21st Century. A John Deely Reader* (Scranton, PA: Scranton University Press).
- Collingwood, R. G.
1939 *An Autobiography* (Oxford University Press).
- Collingwood, R. G.
1946 *The Idea of History* (Oxford University Press).
- Commager, Henri Steel
1965 *The Nature and Study of History* (Columbus, Ohio: Charles E. Merrill Publishing Company).
- Deely, Brooke. See Williams Deely
2008 “Teresa of Avila: Time for a Semiosis Beyond Feminism”, in *Semiotics 2008*, ed. John Deely and Leonard Sbocchi (Ottawa, Canada: Legas Publishing, 2009).

- Deely, John
1976 "The Doctrine of Signs: Taking Form at Last", *Semiotica* 18: 2, 171–193.
- Deely, John
1978 "What's in a Name?" (review of Sebeok 1976), *Semiotica* 22.1–2, 151–181.
- Deely, John
1982 *Introducing Semiotic* (Bloomington: Indiana University Press).
- Deely, John
1982a "On the Notion of Phytosemiotics", paper presented at the 1982 seventh Annual Meeting of the Semiotic Society of America, Buffalo, New York; published in Deely, Williams, and Kruse, eds. 1986: 96–103.
- Deely, John
1984 "Semiotic as Framework and Direction", presented October 10 at the October 8–10 "State-of-the-Art" Research Conference held at Indiana University, Bloomington; published in Deely, Williams, and Kruse 1986: text 264–271, notes 287–288.
- Deely, John
1985 "Editorial AfterWord" and critical apparatus to *Tractatus de Signis: The Semiotic of John Poincot* (Berkeley: University of California Press), 391/514; electronic version hypertext-linked (Charlottesville, VA: Intelix Corp.; see entry under Poincot 1632 below).
- Deely, John
1985a *Logic as a Liberal Art* (Victoria College of the University of Toronto: Toronto Semiotic Circle Monograph Series No. 3).
- Deely, John
1985b "Semiotic and the Liberal Arts", *The New Scholasticism* LIX.3 (September), 296–322.
- Deely, John
1986 "John Locke's Place in the History of Semiotic Inquiry", in *Semiotics 1986*, ed. John Deely and Jonathan Evans (Lanham, MD: University Press of America, 1987), 406–418.
- Deely, John
1986a "Doctrine", terminological entry for the *Encyclopedic Dictionary of Semiotics*, ed. Thomas A. Sebeok et al. (Berlin: Mouton de Gruyter), Tome I, p. 214.
- Deely, John
1995 "Quid Sit Postmodernismus?", in *Postmodernism and Christian Philosophy*, ed. Roman T. Ciapalo (Washington, DC: Catholic University of America Press, 1997, for the American Maritain Association), 68–96. An essay on the work of Etienne Gilson and Jacques Maritain in relation to Poincot.

- Deely, John
2001 *Four Ages of Understanding: The First Postmodern Survey of Philosophy from Ancient Times to the Turn of the Twenty-first Century* (Toronto, Canada: University of Toronto Press).
- Deely, John
2003 “The Quasi-Error of the External World”, in the Sebeok Memorial Special Issue of *Cybernetics & Human Knowing*, edited by Søren Brier, Vol. 10.1 (2003), 25–46.
- Deely, John
2007 “The Primary Modeling System in Animals”, in *La Filosofia del Linguaggio come arte dell’ascolto: sulla ricerca scientifica di Augusto Ponzio/Philosophy of Language as the art of listening: on Augusto Ponzio’s scientific research*, ed. Susan Petrilli (Bari, Italy: Edizione dal Sud), 161–179.
- Deely, John
2008 “From Semiosis to Semioethics: The Full Vista of the Action of Signs” in *Sign Systems Studies*, 36.2, 437–491, subsequently reprinted in expanded fifth edition of *Basics of Semiotics* below.
- Deely, John
2009 “The Full Vista of the Action of Signs” in expanded fifth edition of *Basics of Semiotics* (Tartu, Estonia: Tartu University Press, 2009), 233–275.
- Deely, John
2009a “Aristotle’s Triangle and the Triadic Sign”, Prologue to *Semiotics 2008* (Proceedings of the 33rd Annual SSA Meeting held in Houston, Texas, October 16–19, 2008; Toronto, Canada: Legas).
- Deely, John
2010 *Semiotics Seen Synchronically: the View from 2010* (Ottawa, Ontario, Canada: Legas).
- Deely, John, Brooke Williams, and Felicia E. Kruse, Editors
1986 *Frontiers in Semiotics* (Bloomington, IN: Indiana University Press).
- Destler, Chester M.
1970 “The Crocean Origin of Becker’s Historical Relativism”, *History and Theory* 9.3 (1950), 335–342.
- Oyle, John P.
1984 “The Conimbricenses on the Relations Involved in Signs”, in *Semiotics 1984*, ed. John Deely (Lanham, Maryland: University Press of America), 567–576.
- Eco, Umberto
1976 *A Theory of Semiotics* (Bloomington: Indiana University Press).
- Eco, Umberto
1983 “Horns, Hooves, Insteps: Some Hypotheses on Three Types of Abduction”, in Eco and Sebeok 1983: 198–220.

- Eco, Umberto
2009 "On the Ontology of Fictional Characters: A Semiotic Approach", lecture at the University of Tartu, Estonia, May 6.
- Eco, Umberto, and Thomas A. Sebeok, eds.
1983 *The Sign of Three. Dupan, Holmes, and Peirce* (Bloomington: Indian University Press).
- Eco, Umberto, and Thomas A. Sebeok, eds.
1984 *Semiotics and the Philosophy of Language* (Bloomington: Indiana University Press).
- Eco, Umberto, and Thomas A. Sebeok, eds.
2009 "On the Ontology of Fictional Characters: A Semiotic Approach", lecture at the University of Tartu, Estonia, May 6.
- Eliot, T. S.
1942 *Four Quartets* (San Diego: Harcourt Brace Jovanovich, 1971).
- Eschbach, Achim, and Jurgen Trabant, eds.
1983 *History of Semiotics* (Amsterdam: John Benjamins).
- Gardin, Jean-Claude, Paul Bouissac, and Kenneth E. Foote
1984 "A Program for Semiotics", presented by Paul Bouissac on October 10 to the "State-of-the-Art" Research Conference held at Indiana University, Bloomington, October 8–10. He had earlier circulated this Program for signatures, June 15, 1984, at the "A Program for Semiotics", June 15, 1984, at the Toronto ISISSS 84, subsequently published under the same title as a "Guest Editoria", in *Semiotica* 52–1/2, 1–5.
- Hall, Terry
2008 "Signs and Reversals of Identity in Sophocles' Oedipus Tyrannus", in *Semiotics 2008*, ed. John Deely and Leonard Sbrocchi (Ottawa, Canada: Legas Publishing, 2009), 373–396.
- Harlan, David
1989 "Intellectual History and the Return of Literature", *American Historical Review* 94 (3), 581–609.
- Hexter, J. H.
1979 *On Historians* (Cambridge, Mass.: Harvard University Press).
- Hollister, C. Warren
1983 Personal letter of 2 September 1983.
- Lotman, Yuri M.
1990 *Universe of the Mind: A Semiotic Theory of Culture*, tr. Ann Shukman (United Kingdom: I.B.Tauris & Co Ltd).
- Maritain, Jacques
1914 *La Philosophie Bergsonienne: Etudes Critiques* (Paris: Marcel Riviere et Cie). The revised and expanded 3rd edition of this work (Paris: Desclee de Brouwer, 1931), was further expanded in the English trans. by Mabelle L. Andison in collaboration with J. Gordon Andison, entitled *Bergsonian Philosophy and Thomism* (New York: The Philosophical Library). Citation in the present essay is from the Andison translation.

- Maritain, Jacques
 1957 “Language and the Theory of Sign”, originally published in English in Anshen ed. 1957: 86–101, is reprinted, with the addition of a full technical apparatus explicitly connecting the essay to Maritain’s work on semiotic begun in 1937 and to the text of Peirce 1632 on which Maritain centrally drew, in Deely, Williams and Kruse eds. 1986: 51–62. Page references in this book are based on the 1986 reprint as the most definitive English version.
- Marrou, Henri-Irénée
 1959 *De la connaissance historique*. 4th ed., rev. Paris: Seuil. [Page reference here is to the English trans. By Robert J. Olsen, *The Meaning of History* (Montreal: Palm publishers, 1966)].
- Morris, Charles W.
 1975 Personal letter to Thomas A. Sebeok, in archive of Semiotic Society of America, University of Indiana.
- Peirce, Charles Sanders
 i.1866–1913 *The Collected Papers of Charles Sanders Peirce*, abbreviated CP, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958); all eight vols. in electronic form ed. John Deely with an Introduction “Membra Fictae Disjecta – A Disordered Array of Severed Parts” (Charlottesville, VA: Intelix Corporation, 1994). Dating within the CP is based on the Burks Bibliography at the end of CP 8. The abbreviation followed by volume and paragraph numbers with a period between follows the standard CP reference form.
- Peirce, Charles Sanders
 c.1896 Unpublished manuscript notes for a never completed history of science, published in the *Collected Papers* 1.43–125, under the title “Lessons from the History of Science”, 19–49.
- Peirce, Charles Sanders
 1902 “Premise (and Premiss)”, entry for Baldwin 1901–1902 (q.v.), Vol. 2, pp. 330–331; CP 2.582–583.
- Peirce, Charles Sanders
 1903 Lecture VII “On pragmatism and abduction” in CP 5.180–212, from the materials of the series of lectures on pragmatism, delivered at Harvard University, March–May, 1903.
- Peirce, Charles Sanders
 c.1906 “A Survey of Pragmaticism”, CP 5.464–496.
- Pencak, William
 1986 “Carl Becker and the Semiotics of History”, in *Semiotics 1986*, ed. John Deely and Jonathan Evans (Lanham, MD: University Press of America, 1987), 443–451.

- Pencak, William
1993 *History Signing In. Essays in History and Semiotics*, ed. William Pencak (New York: Peter Lang).
- Petrilli, Susan
2008 "Semiotics and Responsibility: Beyond Specializations, Universalisms, and Humanisms", in the first "Sebeok Fellow Issue" of the *American Journal of Semiotics* 24 (4): 1–48.
- Poinsot, John
1632 *Tractatus de Signis*, trans. and ed. by John Deely in consultation with Ralph Austin Powell (Berkeley: University of California Press, 1985). Available in electronic form (Charlottesville, Virginia: Intelix Corporation, 1992). A corrected second edition of this work, with new editorial materials, is in press with St Augustine's Press for publication in the Spring of 2011.
- Ricoeur, Paul
1955 *Histoire et Vérité* (Paris: Éditions du Seuil; reprinted with additional material in 1964, 1967, and 1968); original ed. trans. as *History and Truth* (Evanston: Northwestern University press, 1965).
- Russell, Anthony F.
1984 *Logic, Philosophy, and History A Study in the Philosophy of History Based on the Work of R. G. Collingwood* (=Sources in Semiotics 1; Lanham, MD: University Press of America.)
- Sebeok, Thomas A.
1967 "Is a Comparative Semiotics Possible?" As reprinted in Sebeok, *Contributions to the Doctrine of Signs*, revised edition, 59–69, (Lanham, MD: University Press of America), 1985.
- Sebeok, Thomas A.
1971 "'Semiotic' and Its Congeners", in *Linguistic and Literary Studies in Honor of Archibald Hill, I: General and Theoretical Linguistics*, ed. Mohammed Ali Jazayery, Edgar C. Polomé, and Werner Winter (Lisse, Netherlands: Peter de Ridder Press), 283–295. Essay reprinted in Sebeok 1985: 47–58, and in Deely, Williams and Kruse 1986: 255–263.
- Sebeok, Thomas A.
1974 "Semiotics: A Survey of the State of the Art", in *Linguistics and Adjacent Arts and Sciences*, Vol. 12 of the *Current Trends in Linguistics* series, ed. Thomas A. Sebeok (The Hague: Mouton), 211–264.
- Sebeok, Thomas A.
1975 "The Semiotic Web: A Chronicle of Prejudices", *Bulletin of Literary Semiotics* 2, 1–63; an "Index of Names" mentioned in this article appears in the following issue, *Bulletin of Literary Semiotics* No. 3 (1976), 25–28. Essay reprinted "with essential corrections and additions" in Sebeok 1976: 149–188. Page references are to the 1976 reprint.

- Sebeok, Thomas A.
 1976 *Contributions to the Doctrine of Signs* (Bloomington, IN, and Lisse, Netherlands: Publication of the Research Center for Language and Semiotic Studies of Indiana University, together with The Peter De Ridder Press). Reprinted with an extended Prefatory Essay by Brooke Williams, "Challenging Signs at the Crossroads", evaluating the book in light of major reviews (=Sources in Semiotics IV; Lanham, MD: University Press of America, 1985).
- Sebeok, Thomas A.
 1979 *The Sign & Its Masters* (Austin: University of Texas Press).
- Sebeok, Thomas A.
 1979a "Looking in the Destination for What Should Have Been Sought in the Source", in *The Sign & Its Masters*" (Austin: University of Texas Press), 84–106.
- Sebeok, Thomas A.
 1981 *The Play of Musement* (Bloomington: Indiana University Press).
- Sebeok, Thomas A.
 1981a "On Hard Facts and Misleading Data", Reviews in *Anthropology*, Vol. 8, no. 1 (Winter), 9–15.
- Sebeok, Thomas A.
 1982 "Foreward", *Introducing Semiotic* (see Deely 1982 above).
- Sebeok, Thomas A.
 1982a March 1 Statement to participants in the Colloquium, "The Role of the Observer", held as a Plenary Session of the seventh Annual Meeting of the Semiotic Society of America, Buffalo, New York, October 1982.
- Sebeok, Thomas A.
 1983 "On the History of Semiotics", in *Semiotics Unfolding*, ed. Tasso Borbé (Berlin: Mouton de Gruyter), 353–354.
- Sebeok, Thomas A.
 1984 "Vital Signs", Presidential Address delivered October 12 to the ninth Annual Meeting of the Semiotic Society of America, Bloomington, Indiana, October 11–14; subsequently printed in *The American Journal of Semiotics* 3.3 (1985), 1–27, and reprinted in Sebeok 1986: 59–79.
- Sebeok, Thomas A.
 1984a June 3. "The Evolution of Communication and the Origin of Language", lecture in the June 1–3 ISISSS '84 Colloquium on "Phylogeny and Ontogeny of Communication Systems". Published under the title "Communication, Language, and Speech. Evolutionary Considerations", in Sebeok 1986a: 10–16.
- Sebeok, Thomas A.
 1985 *Contributions to the Doctrine of Signs* (Sources in Semiotics IV; reprint of 1976 original with an extended Preface by Brooke

Williams, "Challenging Signs at the Crossroads" [Williams 1985], evaluating the book in light of major reviews (Lanham, MD: University Press of America).

- Sebeok, Thomas A.
1986 "A Signifying Man", feature review of *Tractatus de Signis* in *The New York Times Book Review* for Easter Sunday, 30 March 1986, pp. 14–15; German translation by Jeff Bernard appears in *Semiotische Berichte* Jg. 11 2/1987: 234–239, with translator's "Anmerkung" p. 240.
- Sebeok, Thomas A.
1986a *I Think I Am A Verb. More Contributions to the Doctrine of Signs* (New York: Plenum Press).
- Sebeok, Thomas A.
1987 "Language: How Primary a Modeling System?", in *Semiotics 1987*, ed. John Deely (Lanham, MD: University Press of America, 1988), 15–27.
- Sebeok, Thomas A.
1988 "In What Sense Is Language a Primary Modeling System?" *Proceedings of the 25th Symposium of the Tartu-Moscow School of Semiotics*, ed. Henri Broms and Rebecca Kaufmann (Helsinki: Artor Inc.), 67–80.
- Sebeok, Thomas A.
1991 *Semiotics in the United States* (Bloomington, IN: Indiana University Press).
- Sebeok, Thomas A.
2001 *Global Semiotics* (Bloomington, IN: Indiana University Press).
- Sebeok, and Thure von Uexkull
1984 *A Semiotic Perspective on the Sciences: Steps toward a New Paradigm* (Victoria College of the University of Toronto: Toronto Semiotic Circle Publication Series, No. 5), subsequently printed with minor additions and under the same title as a "Position Paper" in *Semiotica* 52–1/2 (also 1984), 7–47.
- Sebeok, Thomas A., and Jean Umiker-Sebeok
1979 "'You Know My Method': A Juxtaposition of Charles S. Peirce and Sherlock Holmes", *Semiotica* 26: 203–250. Subsequently reprinted in several variant versions: see 1980 and 1983 under this entry, and Sebeok 1981: 17–52.
- Sebeok, Thomas A., and Jean Umiker-Sebeok
1980 *'You Know My Method'. A Juxtaposition of Charles S. Peirce and Sherlock Holmes* (Bloomington, Indiana: Gaslight Publications). Enhanced monograph edition of 1979 above.
- Sebeok, Thomas A., and Jean Umiker-Sebeok
1983 "'You Know My Method': A Juxtaposition of Charles S. Peirce and Sherlock Holmes", in Eco and Sebeok 1983: 17–58. Variant version of 1979 and 1980a above, and of Sebeok 1981: 17–52.

- Sebeok, Thomas A., General Editor; Paul Bouissac, Umberto Eco, Jerzy Pelc, Roland Posner, Alain Rey, Ann Shukman, Editorial Board
 1986 *Encyclopedic Dictionary of Semiotics* (Berlin: Mouton de Gruyter), in 3 Volumes.
- Shank, Gary
 1987 "Abductive Strategies in Educational Research", *The American Journal of Semiotics* 5.2, 275–290.
- Smith, Charlotte Watkins
 1956 *Carl Becker: On History and the Climate of Opinion* (Ithaca, New York: Cornell University Press).
- Strout, Cushing
 1958 *The Pragmatic Revolt in American Historiography: Carl Becker and Charles Beard* (New Haven: Yale University Press).
- Tillinghast, Pardon E.
 1972 *The Specious Past* (Menlo Park, California: Addison-Wesley Publishing Company).
- Toews, John E.
 1987 "Intellectual History after the Linguistic Turn: The Autonomy of Meaning and the Irreducibility of Experience", in *American Historical Review* 82.4 (October), 879–907.
- von Ranke, Leopold
 1824 *Geschichte der romanischen und germanischen Völker von 1494 bis 1514* (*History of the Latin and Teutonic Nations from 1494 to 1514* (Leipzig und Berlin : G. Reimer, gedruckt bey Leopold Bäntsch).
- von Ranke, Leopold
 1824a "Zur Kritik neuerer Geschichtschreiber ("Critique of modern historical writing"), Eine Beylage ["Supplement" or "Addition"] in desselben romanischen und germanischen Geschichten" (1824 entry preceding), published as a separately bound volume in Leipzig and Berlin by G. Reimer (the same publisher as for 1824 entry preceding).
- Watt, William C.
 1978 "Review" of Eco 1976 and Sebeok 1976 (q.v.), *American Anthropologist* 80.3, 714–716.
- Wedgwood, C. V.
 1967 *The Sense of the Past. Thirteen Studies in the Theory and Practice of History* (New York: Collier Books; originally published by Macmillan in 1960 under the title *Truth and Opinion*).
- White, Hayden
 1971 "Croce and Becker: A Note on the Evidence of Influence", *History and Theory* 9.1 (1971), 222–227.
- White, Hayden
 1978 *Tropics of Discourse. Essays in Cultural Criticism* (Baltimore: The Johns Hopkins University Press).

- Williams, Brooke
1982 "The Historian as Observer", in *Semiotics 1982*, ed. John Deely and Jonathan Evans (Lanham, MD: University Press of America, 1987), 13–25.
- Williams, Brooke
1983 "History as a Semiotic Anomaly", in *Semiotics 1983*, ed. Jonathan Evans and John Deely (Lanham, MD: University Press of America, 1987), 409–419.
- Williams, Brooke
1984 "Foreword" to *Logic, Philosophy, and History* by A. F. Russell (Lanham, MD: University Press of America, 1984).
- Williams, Brooke
1985 "Challenging Signs at the Crossroads", prefatory essay to Sebeok 1985: xv–xlii.
- Williams, Brooke
1985a *History and Semiotic* (Toronto Semiotic Circle Monograph, No. 4, Summer; Victoria University of the University of Toronto).
- Williams, Brooke
1985b "What Has History To Do with Semiotic", *Semiotica* 54.3/4, 267–333.
- Williams, Brooke
1986 "History in Relation to Semiotic", in *Frontiers in Semiotics*, ed. Deely, Williams, and Kruse (1986: 217–223. Bloomington, IN: Indiana University Press), 217–223.
- Williams, Brooke
1987 "Opening Dialogue between the Discipline of History and Semiotic", in *The Semiotic Web*, ed. Thomas A. Sebeok and Jean Umiker-Sebeok (Berlin: Mouton de Gruyter, 1998), pp. 821–834.
- Williams, Brooke
1987a "Historiography as a Current Event", in *Semiotics 1987*, ed. John Deely (Lanham, MD: University Press of America).
- Williams, Brooke
1987b "Introducing Semiotic to Historians", paper presented at the 102nd Annual Meeting of the American Historical Association, Washington D.C., December 27–30, 1987, in *Proceedings of the American Historical Association*, reference 10485, available on microfilm or in xerox form.
- Williams, Brooke
1990 "Uma década de debates: História e Semiótica nos anos 80", *Face* 3.1 (janeiro/junho), 11–28.
- Williams, Brooke
1991 "Introduction", co-authored with William Pencak, in *Semiotica* 83 (3/4), 193–196. Special Issue on History, guest edited by Brooke Williams and William Pencak.

Williams, Brooke

1991a "History and Semiotics in the 1990s", *Semiotica* 83.3/4, 385–417.

Williams, Brooke

2008 "Teresa of Avila: Time for a Semiosis Beyond Feminism", in *Semiotics 2008*, ed. John Deely and Leonard Sbrocchi (Ottawa, Canada: Legas Publishing, 2009), 34–47.

Williams, Brooke, and Pencak, William

1991 Guest co-editors of Special Issue on History of *Semiotica* 71.

Woolf, Virginia (25 January 1882–1941 March 28)

1929 *A Room of One's Own* (Orlando, FL: Harcourt, Brace & Co.)

Part II. Vignettes and stories

Chapter 21

Ubiquity

Lisa Block de Behar

The great many attributes his prodigiously lucid nature had been gifted with were multiplied by an exceptional disciplinary background where the natural sciences joined the human sciences in a play of knowledge, attempting to reconstitute the unity of language and nature, joining the word and the world in one of the harmonies of the symbol. Among the many memories and acknowledgements I can think of, I am pleased to evoke one of those attributes in particular: Tom's singular disposition towards ubiquity.

He had a curious relationship with this planet; he himself used to joke about an unusual ability among mortals "human or otherwise" which was his capacity to be everywhere and, above all, never to be out of place, no matter where he was.

In next to no time, Tom would adapt to the extravagance of remote places, whose distances and differences he would celebrate with more ease than surprise, as if he had deciphered beforehand the keys of each culture, unveiling its secret codes or finding in this quest one of the foundations of a universality which was inherent to him and which he was able to discover so easily.

Tom anticipated biographically, emblematically, the development of a globalization about which, in other terms, he theorized and which he practiced *avant-la-lettre*, turning the "knowledge about" into pure "direct acquaintance", making of his fleeting presence his own adventure, of his displacements an event as fluid as the flow of time. Like the *flâneur* strolling in a city, lost in the crowd, making of the daily itinerary a peaceful adventure, of the environment – both exciting and homely – his best path, Tom flew over the world, as if he had already visited the places he was seeing for the first time, as if he never stopped and, at the same time, as if he never lost sight of them: he knew the landscape, he was informed about domestic affairs, he knew what had just happened, what might happen; the world was the "book of nature" that he had read or that he was writing.

He accepted without a doubt the invitation to travel, and, at the same time, he made of his journeys a second nature, his natural way of being. We met him with Jean, or with Jessica or Erica, or alone, first in Vienna, then in Imatra, in Berkeley, in Budapest, in Montevideo, in Buenos Aires, in Mexico, in Barcelona, in Urbino, in Lugano the last time—, and in other cities, even in Bloomington. No matter where we met, he was always so up to date with the place that one had the impression he had been living there for a long time and that he was planning to stay even longer. Not only did he feel at ease in an unlimited world but he also livened up and organized the space which would never be the same after he left. His intellectual participation ordered, in passing, the academic and amicable instances with the same energy, equally rigorous and affectionate.

From each place he visited he would gather his impressions, always vivid and interesting, and these anecdotes abounded in his real and in his virtual conversations. This rare ease with which things happened when he was present always surprised me, as did the good humor with which he could convert any adversity into a joke. As if he had never departed, he maintained with frequency and familiarity the conversations initiated in his last encounter with his eventual interlocutor, ironically resuming discussions, attenuating with his humor flaws and misadventures, moderating them so as to neutralize any shortcoming with a witty reply or an illustrative joke.

Wherever he stayed on his trips, some more lengthy than others, the place was transformed thanks to his presence and his discourse, in a common and sparkling reference, a witticism that acquired a mythical dimension; that place was imprinted by a ritual which, without overlooking the circumstances, put differences into perspective, living his interlocutor a part in the ceremony of universality he carried out in each and every one of his dialogues. Tom did not conceal that unusual condition of feeling at home in the world.

Over a decade ago, I was working in the Hebrew University in Jerusalem. Tom was traveling to the River Plate and we had to coordinate some aspects of the program he would carry out in Montevideo. From Jerusalem I request a person-to-person call, and when I said I needed to speak with Professor Thomas Sebeok, the international operator apologized for starting an almost personal dialogue and asked: – “With professor Sebeok, the semiotician? May I ask you a few questions?” The questions became comments, the stories lasted a long while during which we exchanged impressions about his conferences, his books, the remarkable features of a personality which exuded the joy of knowledge, the pleasure of knowing

and of sharing that knowledge. Tom delighted in the poetic discoveries of etymologies, in puns, the paronomasias which sounds reserve so as to increase senses and the wit that multiplies them. Owner of the knowledge and of our acknowledgement, his grace vindicates from the origins, the actions of thinking and thanking, both as one and the same thing.

When correspondence became electronic and via satellite, that ubiquity, paradoxically, became even more evident, although something changed. It not longer consisted in just the suspension of the place by the continuity of a lively displacement, but also the suspension of time in the simultaneity of the instant. No sooner did I send him a message than I was receiving his abundant replies. So many meetings, symposia, colloquia, conferences, congresses, so many e-mails crossed in a space which makes of simultaneity a suspension of space, of the instant a fleetingness which can no longer be distinguished from eternity, which is now his timeless time.

Chapter 22

Un Sacco di Cane¹

Paul Cogley

The memory of Tom that I would like to preserve concerns an aspect of his personality which was ever-present but was especially foregrounded on this particular evening.

We were the guests of Augusto Ponzio and Susan Petrilli in Bari and on this Friday night they had driven us south along the coast of Puglia to an excellent quayside restaurant. In the car on the way Tom had started a discussion of *film noir*, partly motivated, I assume, by Erica's interest. Soon, we were talking about the Coen brothers' film, *Fargo*, which we both loved, and by the time we were exiting the car at the restaurant we were trading lines from the film, ending each of them with "Oh, yarrrr".

Tom didn't stop after this. When we were seated in the restaurant he started telling jokes and mercilessly teasing Luciano Ponzio. (The legendary ostrich joke and the pornographic psychiatrist yarn have been spread quite widely since). In short, he was on sparkling form, so much so that he nearly detracted from the endless and excellent food that was being served. However, the relentless serving of superb fish dishes precipitated the central event of the evening for me.

When all the food was laid out on the table and it became evident that neither we, the Ponzio or Petrilli families would be able to eat it, Tom started to explain the American tradition of taking home excess food in a doggy bag, especially from Chinese restaurants. He had to engage in some extended explication in order to make the process come to life for his interlocutors and, eventually, he said in a partly conclusive and partly weary manner: "Of course, it wouldn't really work in Italian: 'un sacco di cane'."

The others chuckled at this but when I saw him mimic the action of lifting the bag as he said it, along with the quizzical look he assumed as he did this, I collapsed with laughter. Tom remained deadpan throughout, but I just couldn't stop laughing at the phrase and the nonverbal repertoire he invoked to illustrate it. It was one of those fits of mirth which

1. Written 31 January 2002.

eventually subside but which can be set off again immediately by the slightest reminder of the original joke. Needless to say, Tom took every opportunity to mime the bag-carrying and the quizzical look during what was left of the evening and each time I tried to stop myself from spluttering food across the table.

In the Ponzios' car on the way back, travelling at a time which I knew to be well past Tom's customary retiring hour, he continued to crack jokes in Italian, only a few of which I was able to understand. The other occupants of the vehicle, of course, cottoned on to every utterance he made.

It's well known that Tom was a great collector of jokes and one of the most humorous people you could ever expect to meet. However, what strikes me in retrospect is not so much the amount of fun that he caused us to have that evening as what was happening when he actually effected it. There are precious few moments in life when one is reduced to a wreck of helpless laughter as I was that night. Moreover, such moments of intoxication will usually take place in the company of very close friends whom one has known for a great deal of time. I have some friends of this kind; people I have known since I was at school and I see less frequently than we might desire. Nevertheless, we remain close and I seem to be able to simply start from where we left off whenever I meet them after long gaps. I knew Tom personally for a period which was far too short, yet he was able to establish a relationship just like this. As the above memory illustrates for me, he possessed a unique ability to invoke exactly that kind of friendship where ego dissolves and where one's sense of self is cast off in favour of the pure joy of companionship with the other. In this way he did what only the best of friends can do: he made one feel so important, worthy and interesting that 'importance', 'worth' and 'interest' no longer constitute issues.

Chapter 23

Tom Sebeok, Hoosier

Donald Cunningham

Tom Sebeok was already a legendary figure on the Indiana University campus when I arrived in the Autumn of 1969. I found it interestingly synchronistic that he had come to Indiana University in 1943, the year of my birth. By the time I appeared on the scene he had created IU's renowned Department of Uralic and Altaic Studies, achieved the prestigious rank of Distinguished Professor, and founded several research centers, among them the legendary Research Center for Language and Semiotic Studies (RCLSS). Semiotics was flourishing on the campus and, although I had never heard of it, I was somehow attracted to it. My only prior awareness of Sebeok was through a book he had edited with Charles Osgood on the topic of psycholinguistics. I took a class from Osgood as part of my doctoral work at the University of Illinois, and Osgood had used the book as a course reader. Not long after I arrived I had a lunch with Tom (I don't remember whether at his invitation or mine), where we discussed what a silly old bugger Osgood was!

Lunch was an important vehicle for Sebeok. Our first lunch was at the Tudor Room in the Indiana Memorial Union, where there was always a table reserved for him. Every subsequent time I was at the Tudor Room (and later in other venues around Bloomington) I would see Tom with a variety of different people, often university administrators from whom he was extracting support, but just as often, faculty colleagues who were being not so subtly courted to participate in the initiatives of the RCLSS. There were frequent conferences, summer institutes, regular colloquia, visits from eminent scholars and many more opportunities for Indiana University colleagues to get involved – and a goodly number did, including me. Tom Sebeok was always generous and supportive of me and my career, and for that I will always be grateful.

For purposes of this volume, I thought that some would find it interesting to hear about Tom's teaching. Tom regularly taught a doctoral seminar on Semiotics, the topic of which was whatever was of interest to him at that moment. He routinely scheduled the class at 8:00 a.m. (he had been up since 4:00 a.m. anyway) in a windowless seminar room in the I.U.

Library, thereby insuring that only the most dedicated of students would enroll. Although my dedication was inconsistent, I often sat in on the class. He had several rules: You must be on time. You must not leave before the class is finished. You must not ask questions until the question period at the end. Class sessions were 75 minutes and he routinely saved 10–15 minutes for questions, never enough time, but for those 75 minutes you had his undivided attention and he had yours. He also devoted the entire final class session to student questions. I never saw him use notes, only occasionally reading a pertinent quotation. The presentations appeared extemporaneous but as many of you know, were skillfully crafted and scripted. I think Tom used the class sessions to hone old favorites and “break in” new material for his many presentations around the world. The only requirement for students, other than those already mentioned, was a course paper applying semiotics to their field of study. No one could major in semiotics at Indiana University. You used semiotics as a tool to think about your own discipline, not as a discipline in and of itself.

I was unable to find any artifacts (notes, syllabi, handouts) in my files, but an IU colleague, Joan Middendorf, who was a graduate student at the time (and a bit of a packrat!) allowed me to borrow her class notes from 1988, a few years before Tom retired. Here is the schedule with topics (he would typically write these on a blackboard or just announce the schedule week by week rather than preparing a formal handout).

Class 1	Basic Communication Model
Class 2	Ways to divide signs / Modeling of semiotics
Class 3	Cueing
Class 4	Clever Hans Effect / Psychic readers
Class 5	Psychic readers (cont.)/What is a sign?
Class 6	More on Psychic readers
Class 7	The origin/history of semiosis – from the” big bang”
Class 8	More on the history of semiosis – animal communication
Class 9	More on the history of semiosis – the rise of homo sapiens
Class 10	Umwelt
Class 11	Classifying signs: iconicity
Class 12	Icons (cont.)
Class 13	Indexical signs

Class 14	Indexes (cont.)
Class 15	Symptom (as a form of index)
Class 16	Object of a sign
Class 17	Words as indexes
Class 18	Words as indexes (continued)
Class 19	From here on, TAS presented applications of semiotics, beginning with his analysis of the movie "ET"
Class 20	More on ET, then an analysis of Sherlock Holmes
Class 21/22	More on Sherlock Holmes
Class 23/24	Signage at a nuclear waste repository
Class 25	Student question day.

Sebeok-philies will recognize many of these topics. Tom's book *A Sign is Just a Sign* is a good source to start with for published versions of some of them. The sessions on the history of semiosis are an extended version of the talk he gave often on the origins or evolution of semiosis from the big bang, through the beginnings of life via prokaryotes and eukaryotes to plants and animals. I have a grainy videotape copy of a version of this lecture that he delivered at Johns Hopkins Medical School that I treasure. Tool using vs. tool making, *umwelt* (invariably illustrated using the common tick), language as a tool for representation and only later as a tool for communication, the criticality of syntax in the construction of *umwelt* – these and many other topics are treated in tantalizing brevity, wit and astuteness.

The juxtaposition of Clever Hans and psychic readers may perplex some but over the series of several weeks, Sebeok shows how psychic readers (palm readers, fortune tellers, psychic counselors, etc.) reflexively employ many of the same strategies that Hans used to get a carrot from Herr von Osten. By carefully reading the signs, and in some cases cleverly creating them, the psychic reader is able to convince the unsuspecting client that there is indeed a connection between the unknown world and the client that only the psychic reader can mediate. Interestingly, Sebeok stressed more than once that these tactics were entirely unethical and dishonest but nevertheless offered a thorough going explanation of how to carry them out!

As a huge fan of Conan Doyle and his alter ego Sherlock Holmes, I relished the class sessions on them. Sebeok talked not only about the

stories but the world that Conan Doyle created that is palpably real for many around the world. I myself have visited 221b Baker Street, counted the steps up to Holmes' rooms, and seen the Persian slipper full of tobacco on the mantle! These signs, these indexes, are carefully enumerated and woven into the stories by Conan Doyle, who, while he may not have invented the genre of detective fiction, certainly placed his indelible stamp upon it. There are so many of these indexes: The lodgings at 221b, the window out of which Holmes and Watson looked that set the stage for so many of their adventures, the hansom cab (never the first or the second) that carried them on their journeys, and so forth. And, of course, Holmes' science of deduction, that we know is actually a form of abduction plays a key role in all of the stories. Sebeok cites example after example of Holmes reading the signs, primarily indexes, as clues and reasoning as to what must be the case for that index to be.

Sebeok's class was a joy to attend especially as I, unlike most of the students, had many opportunities to follow up and dig deeper into his vast treasure trove of knowledge. When he retired in 1991, he often would come to speak in the class I taught on "Cognition and Semiotics". Considering his usual lecture fee I was happy to pick up the tab for lunch afterwards. But his retirement signaled the beginning of a decline in interest in semiotics on the Bloomington campus. A few of us tried to hold the line, but did not succeed. As I retire in a few weeks, I wonder if there will even be any courses on campus with semiotics in the title or deeply enmeshed in the content. What a pity if not. But we continue to have Tom's words and deeds available if we have the wisdom to use them.

Chapter 24

Tom Sebeok, the man who loved time¹

John Deely

In the Spring of 1975, I received a call from Tom, telling me about a conference that had been organized at the University of South Florida, with the request that I attend. Now the list of conference participants, that is to say, those assigned to present papers, was already complete, and the general air of the conference as Tom outlined it to me had little apparent connection to philosophy professionally conceived, which meant that I would not be able to get funding from my then-college. I explained this to Tom, and he replied, “Yes, but the real purpose of the Tampa conference is to be an organizational meeting for the founding of a Semiotic Society of America, and I want you to be there for that.”

So I agreed to go, even wholly at my own expense. I didn’t fully realize it at the time, but it proved to be a chance to be present at the creation of something in which the amazing complexity and organizational abilities of Tom’s mind would be something like fully on display. I myself Tom had appointed to the Constitutional Committee for the new Society, under the chairmanship of Allen Walker Read, though I became secretary of the group and, under Tom’s clear guidance, actually came to fashion the final text as it exists today, with the exception of the one amendment to allow any two persons to declare themselves a “couple” for membership purposes, thus saving on dues, an amendment which came out of a later meeting of the Society in Denver and which I agreed to draft for some members who were insistent on the idea. But that is another story.

In Tampa, Tom was not only present as an *eminence grise* arranging the background meetings for what was to become in the following year in Atlanta the first official Annual Meeting of the Semiotic Society of America. He directly participated both in presenting a paper of his own and in chairing at least one of the main sessions.

I say “at least one”, because it was from there that I received one of my most vivid memories of Tom from the early years of our long and close association, one that forever influenced my personal approach to public

1. Written in Bari, Italy, 19 February 2002.

presentations, and one that has had a shaping influence on the way we try to conduct the annual programs of the SSA to this day.

As Session Chair, Tom sat, as I remember it, in front of the speakers rather than beside them. After introducing each speaker, he would sit down till it was time to introduce the next speaker, returning to the podium for the purpose, and so on. Each speaker was allotted thirty minutes total, with the recommendation that twenty minutes be presentation, with ten minutes for questions. The total time was to be absolute, the twenty/ten allocation relative, that is to say, left up to the speaker to determine.

Needless to say, many speakers preferred to take up the whole half hour talking with no time for questions. Perhaps even more needless to say, many speakers inclined to take more than the allotted thirty minutes continuing to talk. For this endemic inclination of perhaps the majority of academics, Tom had a remedy. Sitting in front of the speakers, when they reached twenty-five minutes, he prominently flashed a white card – outright displayed it, more accurately – with a big numeral “5” in black. At twenty-eight minutes, out came a big numeral “2” card, and finally, at thirty minutes, a card with a big black “0” displayed.

Now this “0”, I noted with amusement, determinedly displayed by Tom so the speaker had no chance to miss it, had an almost miraculous effect. Speaker after speaker would look stunned, then bewildered, then would fumble hastily to “summarize and conclude”, and withdraw as Tom reclaimed the podium in introducing the next speaker. Even the most garrulous among the presenters, in this way, were never able to gain more than thirty seconds extra time over their allotted thirty minutes.

The pattern was always the same: the speaker would proceed as if there were no tomorrow, until Tom displayed his big black “5”. At that moment the speaker would look startled, then a bit uncomfortable, adjusting the pace of the following remarks to reflect the realization that the Session Chair, incredulously, seemed fully to be serious about enforcing limits even on so important a discourse. By the time the big black “2” went on display, the speaker, already a bit off-stride from the “5”, became even more visibly uncomfortable, and hastened to trim the remaining remarks to meet or beat the “0”, or, if not actually beat it, at least succumb to it with no more than fifteen or twenty seconds over-run.

Then came the most memorable speaker of the day, memorable less for what he said (the speaker in question happened to be male) than for what he attempted to be: the irresistible force overcoming the immovable obstacle.

This particular speaker not only presented his remarks with authority and confidence in their importance, and with the air that eternity itself could hardly be enough to absorb the importance of his views on the audience's part. He alone showed no nonverbal sign, not a syllable of body language, to acknowledge the display before his eyes of the "5" minutes remaining card by Tom. Tom's face was characteristically impassive, and after displaying the "5" prominently and at sufficient length to leave no doubt that the speaker had seen the card, Tom ignored the lack of any acknowledgement of the seeing, and put the card away. Up went the "2" card, with again complete nonacknowledgement from the speaker and impassivity in Tom's face, masking the certain knowledge that the speaker could not but have seen the card he so conspicuously declined to acknowledge in any manner whatever. Finally came the display of the "0" card.

"Zero", in this instance, described both the content of Tom's card and no less the response of the speaker. Exactly as he had at "5" and "2", the speaker at "0" displayed no acknowledgement whatever that he was subject to any authority from the Session Chair. He continued to speak as if his time were just beginning to run. Within seconds, "0" card in hand, Tom arose, stepped between speaking speaker and microphone, and introduced the next speaker. The shocked look on the speaking speaker is never to be forgotten, as one may imagine. Did he ever fall silent as he left the room, now conveying in zöosemiotic fashion humiliation and outrage? Or is he still speaking today?

What is certain is that in Tampa that day the next speaker began within the framework of the program when he was scheduled to begin, and he got his full time allotted to speak, neither more nor less. The following year Tom published a volume from this event entitled *A Perfusion of Signs*, billed as the "transactions of the First North American Semiotics Colloquium, University of South Florida, Tampa, 28–30 July 1975". I never compared the volume contents with the Tampa program to see if the star speaker put his remarks in the published volume or not. It hardly mattered.

A decade later, as the 1985 Reading, Pennsylvania meeting of the SSA was in its third day, I encountered Tom in the hall, still carrying around his big red-covered five-pound copy of Poincaré's *Tractatus de Signis* which I had given him on the first day. "If you had organized this conference", he said to me, "and a speaker failed to show, what would you do?" "I would leave the slot empty and keep the program as scheduled", I replied. "That's what I would do too", Tom replied. I could not but note the satisfaction in his voice that I had made the right reply.

Chapter 25

Brief encounters with Thomas A. Sebeok

Mariana Neț

Introduction

Thomas A. Sebeok was one of the providential people in my life. I will try to explain how it all came about. But I am afraid that I could hardly avoid speaking about myself as well. I will narrate a few episodes in my life, in which Tom Sebeok was one of the main characters. I suppose my narrative will not be unlike many others. As far as I know, Tom Sebeok did play a beneficial part in the professional career of many of our colleagues, worldwide. Anyway, as far as I am concerned, things started as follows.

Palermo 1984. Brief encounter 1.

In June 1984, I was a relatively young, possibly promising, but certainly unknown semiotician. I was 28, I had got an M.A. at Bucharest University in 1979, and had been trying, all along, to keep in touch with the scholarly world, especially by reading quite a lot, and writing a few articles. I had great ambitions, of course. I was craving to do something significant, which would shatter the scholarly world, but, well, so far nothing had happened. Perhaps this last sentence is a bit exaggerated, nonetheless. For in 1982, I had managed, however, I still wonder how, to lure the official Cerberus to drowsiness, and got permission to go to Urbino, to attend the summer school. And, on February 1, 1984, I had finally managed to resign from the publicity agency I had been working in, and got employed, as assistant researcher, at the Institute of Linguistics in Bucharest. There are some lucky periods in everyone's life, I believe, just as there are quite a few unlucky ones. My second piece of luck in 1984 was to obtain, once again, the officials' permission to go abroad on scientific business. (To those who ignore what it meant to be allowed to cross the borders of Communist Romania, what irrational forces presided over this act of "transgression" it would be too long, and probably useless, to explain.)

Anyway, there I was, in June 1984, in the wonderful city of Palermo, participating in the first (semiotic) congress in my life. I was dazed,

awkward, and bewildered. Too many events, too many personalities (usually 2 or 3 scheduled to speak at the same time), and I was hardly ever in the right place. On top of it all, I had a few messages to deliver to some of these *monstres sacrés*. Fortunately, there was an informal reception with the Mayor of Palermo. And there, I was bold enough to fulfill most of this task . . .

Tom Sebeok was standing in line, like everybody else, to get something to eat from the *buffet*. I said a silent prayer, and approached him. I introduced myself, probably in a trembling voice, and presented him with the book one of his Romanian colleagues had chosen to send to him in this way. To my surprise and – definitely – pleasure, the white-bearded man who was already one of the greatest semioticians in the world and who was modestly waiting for his turn to come in front of a sideboard overwhelmed with pastries, ice-creams and exotic fruits, did not dismiss me immediately afterwards. He asked me where I was working.

“At the Institute of Linguistics, in Bucharest”, I said.

“Is Iorgu Iordan still alive?”, he further inquired, to my great astonishment that he was acquainted with the name of a Romanian linguist, and that he pronounced it correctly.

At my reply in the affirmative, he added:

“But he must be 150.”

Too scared to take the joke, I began to explain that no, he was just about 80, but he had retired, of course.

“And who is the Director of your Institute now?”

“Professor Coteanu, who is . . .”

“Yes”, he interrupted, “I know Coteanu, too. Please give him my regards. Also to my old friend Alexandru Rosetti.”

I was stunned. With a few words of thanks, I withdrew. I had kept him to myself too long, and there were others, biding their time.

Four years elapsed. I was still working at the Institute (I still am, as a matter of fact). I had almost forgotten my brief encounter with Tom Sebeok. Nothing of significance had happened then, or so I thought. I had not even sent him a greeting card in the meantime. I was quite sure he would be at a loss to remember who was the sender. After all, he was supposed to meet about 200 new people each and every year. . .

Suddenly, one morning, in spring 1988, my late Professor, I. Coteanu invited me to his office. He showed me a letter that Tom Sebeok had just sent him. It was a kind request for a presentation of the state-of-the-art in Romanian semiotics, scheduled to come out in *The Semiotic Web* in the next year. The letter ended with a suggestion. Tom said he thought I

would be fit to do this job. He said that he remembered our talk in Palermo, at the 3rd IASS/AIS Congress. My amazement was beyond words. How on earth could Tom remember having talked to me on that particular occasion, and how could he be so well acquainted with a name he had hardly heard?!

(In the meantime, I have thought, from time to time, of this tremendous memory of his, and I think I know how he exercised it, but this is just a supposition, and here I am only giving facts).

Anyway, the story of this first encounter is also an account of how I earned my first check in foreign currency. The fee for this presentation, published in *The Semiotic Web 1989* was \$100.

Budapest, Vienna, Sigharting 1990. Brief encounter 2.

After the changes which had taken place in Romania in 1989, it was easier to travel. My old friend Jeff Bernard (with whom I had collaborated for a fairly long time, but whose personal acquaintance I had not yet made) invited me to the Conference in Honor of Thomas A. Sebeok's 70th Birthday, to be held in Budapest and Vienna in the fall of 1990. And to the 6th conference of the Austrian Association for Semiotics, to be held in Sigharting.

This trip was a kind of dream made true. There, I met Tom again, as well as his wife and daughters. (I also met John Pier, John Deely, Maria Popova, and so many others, who, at one time or another, were to play a part in the development of my professional life).

My birthday present for Tom was a silk tie. I saw him wearing it the next day. I had also brought him a leather-bound copybook, from my friend and colleague Ilinca Constantinescu (who had met him some two decades ago in Salzburg, and had been a Research Associate at the RCLSS in Bloomington afterwards – the pattern seems to repeat). He used the copybook during the conference.

My own paper was to be held only in Vienna, during the second part of the conference. In Budapest, on the inaugural day, after the formal addresses, during the talks following the morning lectures, I made a brief comment. It seems it was to the point, as not a few colleagues said so afterwards. The afternoon session followed, then a cocktail party. Then, after a day which had been so full of events, busy and pleasant, we became more informal. We got together, talked and laughed. And planned other meetings, journal issues, conferences. The usual scenario was unfolding in full swing. . . . While I was eating a huge ham-and-cheese sandwich, Tom

came up to me and suggested *ex abrupto* that I should apply for a Fulbright (which, he said, he was sure I would get) and go to Bloomington during the next academic year. Need I say how grateful I was for this suggestion?!

In the next few days, I watched Tom as closely and as unobtrusively as I could. He seemed deeply touched to be in his native Budapest again, after an absence of decades, to show places to his wife and children. He was happy to go to Vienna for, I think, the hundredth time in his life (and to stay at the hotel *Regina*, as he told me; until a few years before, he added, it used to be *Mozart* – or was it the other way round?!). When he learnt that some of us were planning to go to the Staatsoper one evening, he said he would join us, provided there was a performance of *Don Giovanni*. None of us eventually went (the programme was too full). And, as far as I remember, there was no *Don Giovanni* then.

Happy, pleased, and in the centre of attention, Tom was always level, equal to himself, smiling, eager to entertain everyone, always paying attention to people and incidents. And always going to bed at 9 or 9:30 p.m. at the latest.

On the bus which drove us all from Budapest to Vienna, and then from Vienna to Sigharting, Tom gave me a detailed account of how University life was organised in Bloomington, of the Opera there (which had six performances each season, with two castings each, and where everything was done by students), of his favourite café (which was then *Encore*, but which, two years later, when I actually went to Bloomington, was to be *Uptown Café*), of his house (which was “sinking under the burden of books”, therefore he had begun to donate most of them to the University Library) . . .

It was also on one of these buses that Tom suggested I should translate into Romanian “*You Know My Method*”. *A Juxtaposition of Sherlock Holmes and Charles Sanders Peirce*, which he and Jean had written “as a joke” about a decade before. In 1994, in Berkeley, I was able to bring them the booklet and, later on, to tell them about its success in this country.

It was also on that bus Tom suggested I should be a member of the “Mouton d’Or” jury in the 1992–1994 span. It goes without saying that I was happy to accept.

In Sigharting, one morning, Tom and I talked for about an hour, on the grounds of the castle. Frequently enough, we met Roland Posner and Solomon Marcus, who were also taking a morning stroll. I think it was on

that morning that I realised that, in spite of his age, Tom was really quite young. His views on life were at least as modern as my own. And he liked to know everything about the latest scientific discoveries, and to make the utmost use of them. He seemed to know everything about faxes and computers (not so frequent, in 1990, even in the US), as he later proved to know everything about the Internet. . .

I think this second encounter I had with Tom Sebeok was the longest, ever.

As soon as I got back home, I applied for a Fulbright grant. I failed. Tom seemed more concerned about this failure than I was. He told me so over the telephone, while I was spending a semester as Research Associate in Mannheim, in the summer of 1991.

In January 1992, I got a letter. Or rather a note. It ran as follows:

“Dear Dr. Neț,

Professor Sebeok suggests that you should apply for an IREX grant”. It further gave the name of the contact person, and the address of the IREX office in Bucharest. The letter was signed by Yvette Rollins, then secretary of the RCLSS.

I complied and, this time, I succeeded.

Urbino and Bloomington 1992. Brief encounter 3.

Things had changed a bit since '84, as far as I was concerned. In February '92, I defended my Ph.D. at Bucharest University. In the fall of 1989, I had published two books. I had also become a fairly frequent collaborator to *Semiotica*.

In 1992, Tom invited me to take part in the conference *Semiotics in the US*, which he organised in Urbino. I was only too happy to go.

By that time, I knew that some six weeks afterwards I was to go to Bloomington. Tom was pleased this scheme had worked at last, but I think he may have felt somewhat ill-at-ease, as some colleagues from a few other ex-Communist countries, which he had invited there before, had tried to extend their stay indefinitely and even applied for jobs. Actually, he told me that much one morning, over the breakfast table, in the cafeteria of the Collegio dei Capuccini. And later, he hinted as much in Bloomington, as tactfully as he could. In spite of my repeated assurances that, much as I loved to travel, I had no intention of leaving Romania for ever, I am not sure he entirely believed me. I still think (although I might be wrong, of course) that he was relieved when I left Bloomington, absolutely according to schedule, on November 30, 1992.

But we are still in Urbino. We were about 20 people in this conference. Happy, careless, working, and enjoying ourselves. (1992 was yet another of my very lucky years, *O les beaux jours!*) We all came across each other daily, in that cosy, medieval and Renaissance city, not only in the College and at the *mensa*, but equally at the Bar del Cole (still talking semiotics), or in one museum and oratorio or other. Tom was always good-humored, and infallibly going to bed by 9 p.m.

This being the case, I was all the more grateful to him and Jean (who was organising a different conference) for their attending the one-hour lecture I gave there one evening about Dumas' *Grand Dictionnaire de Cuisine*. It ended about midnight.

Barely back home for a month or so, on August 30, I started my first journey to the New World. After a month spent at Brown University, in Providence, RI, on September 1, 1992, I finally got to Bloomington. My apartment was only two blocks from the center.

Tom had already retired. And he was absent for almost the whole three-month period I spent in Bloomington. In effect, we met but twice.

First, upon arrival, he invited me to lunch at Uptown Café. We chatted, of course. But we basically talked about my research project on Peirce, and about the best opportunities to commute to Indianapolis, to the Peirce Edition Project, two or three times a week. After lunch, Tom drove me a bit around Bloomington and showed me things.

Tom was not in Bloomington when I gave a one-hour lecture on Peirce. He was still in Turkey and Bulgaria (accompanied by his daughter Erica, I think). A day after coming back, he went to Canada. He was to return during the week of my departure. Jean had already invited me to spend Thanksgiving evening with them.

So I went to their house and spent one of the most pleasant evenings of my life. Besides Tom and Jean and Jessica and Erica, there were Lucia Santaela, as well as a Hungarian family whose name I forget. I remember they were about to leave the US, as the gentleman had recently been appointed Ambassador of the Hungarian Government in an African country (I forget which). Everybody was quite charming, and the food and drink were exquisite, of course. I remember that, during the dinner, they all talked about the recently issued movie *A River Runs Through It*. It was on in Bloomington that very week. Tom had seen it twice, I believe, with his daughter Jessica, who was preparing to go to the Chicago University, which had also been Tom's *alma mater*. This detail accounts for their having been so deeply touched by the movie, at the moment.

I felt really frustrated because I was unable to take part in that discussion. There had been too many things to do during my last week in Bloomington. My luggage to pack, another suitcase to buy (in which to put the two dozen books I had bought there and the hundreds of pages of photocopies I had made), a few other good-bye visits and phone calls to make, books to bring back to the library, some last bills to pay, flight reservation to confirm, etc. And wherever I went, everybody kept talking about *A River Runs Through It*. It had become almost an obsession, but I soon gave up thinking about it. I was to watch it eight years later, on HBO, at home. Immediately afterwards, I sent Tom an e-mail, explaining that, sometimes, though not too often, one's wishes are finally fulfilled. He agreed, with his usual sense of humor.

Berkeley, CA, 1994. Brief encounter 4.

I think this encounter was one of the briefest. Hardly did we talk, for about a quarter of an hour. Tom was in the *patio* of the Clark Kerr Campus, where the 5th IASS/AIS Congress was held, just having a moment's rest, between two long meetings. He said he wanted to come back to Romania, where he had only been three times, in the '70s. I said that I would be glad to put him up in my apartment (which he would have all to himself), to show him about Bucharest, and to arrange for him one or two lectures at my Institute. He agreed to this arrangement, and suggested he would come the next spring, from Budapest, where he was to spend three months, I think. (Finally, he didn't come, for he did not want to pay for his return ticket to Budapest himself. Actually, a year later, on the train from Helsinki to Imatra, he told me that this was not his only – or his real – reason. He said that the people at the *Collegium Budapest*, where he was a Senior Fellow, were not too happy about his travelling too much, when he was supposed to stay and work there. So he had cancelled his trip to Bucharest).

On the same occasion, at Berkeley, in '94, Tom invited me for the next year, in Urbino, to the conference on *The Seven Deadly Sins* (which he was organizing together with Jean and with Jørgen Dines Johansen. In the end, Tom did not manage to get to Urbino, though nearly all those he invited did). I said that my favourite sin was sloth. He declared his was pride.

I always liked Tom's little jokes. During that hot afternoon, in the Clark Kerr Campus, in Berkeley, CA, he stated he was a feminist. My

colleague, Pia Brînzeu, from Timișoara, who was also there, said that, on the contrary, she was a man-chauvinist. What was there left for me, under the circumstances, than to say that I was neither, and I didn't care about such differences? Therefore I said so, and made a fool of myself.

Helsinki and Imatra 1995. Brief encounter 5.

This was also quite a brief encounter, although it's a tale of two cities and a two-hour journey by train.

In June '95, Eero Tarasti invited me to the Imatra Summer school. When I got there, and thanked him in person for the invitation, he said he could hardly have refrained from issuing it. Tom, he added, had spoken so highly about me, that Eero had become quite eager we should meet. As I got invited to Imatra again after this first visit (I did go to Imatra again in the meantime). I can only hope that Eero Tarasti was not too disappointed.

I met Tom the very moment I arrived in Helsinki, a day before going to Imatra. I was in front of the door of the University Guest House, fumbling in my handbag for the entrance code. Tom and Jean had also just arrived, so I didn't need the code, after all. I took this incident for a good omen.

And I think it was, for I was fairly happy in Finland. *Toute proportion gardée*, I think I shared Tom's love for travelling around the world, though, of course, I could never possibly have half his opportunities. A pity!

I remember that both Tom and Jean came to my lecture on semiotics and gastronomy, and I was really honored that they did.

I also remember that during a longer break, when Tom and Cynthia Grund and I were having a chat over a cup of coffee, a Bulgarian colleague took a photograph of the three of us, as we were the only participants wearing hats. I have never got this photograph, which is yet another pity, for the hats were quite nice!

Bucharest and Cluj 1998. Brief encounter 6.

Unlike my other encounters with Tom Sebeok, this one, almost the last we had, took place in one of the worst years I have ever had. I am pretty sure he was not aware of it. Anyway, his presence in Bucharest was some compensation in the balance.

Tom came to Romania for a month, invited by the New Europe College. He spent nearly all the time there (as I think he did in many other

places) sending e-mails all over the world. He gave a lecture to the New Europe College (where, unfortunately, I was unable to go), and another one at the Department of English of Bucharest University, which I was happy to attend. He also joined about 50 international scholars to the conference *La latinité: l'avenir d'un passé*, held in the Transylvanian city of Cluj. I think he enjoyed the conference. He made the trip to Cluj and back to Bucharest by car, with José Agosto Seabra, then the Portuguese Ambassador to Romania, and with Norma Tasca, his wife, a well-known semiotician. The rest of us went by bus, but we met for lunch in Sighisoara, in a restaurant held in a fifteenth-century old house, said to have been once inhabited by Dracula.

Tom was the only invited speaker in Cluj to give his lecture in English. All the rest of us spoke French. The conference was on Latinity.

While in Bucharest, Tom refused all my invitations to concerts, theatrical performances, museums. But he did come to my house. I asked his permission to invite Ilinca, too, and he was glad to meet her again, after some three decades. I think Tom was happy to be there, in the apartment I had then.

A couple of days later, I went to New Europe College, and interviewed him for the weekly journal *România literară*. He granted me a fairly long interview, which I edited almost immediately, and which came out quite soon afterwards. But I had to send it to Tom in Bloomington, for he had already left. He wrote to me very warmly about it, and said everybody had liked it.

I must say that Tom always answered letters (messages of all kinds, in effect) immediately. That is, as soon as he got them (for most of the time he was away from home). He explained he had good reason for it, because he had a huge mail and otherwise he would have been unable to cope with it.

When Tom came to Bucharest, he told me he had entirely ceased to use the snail mail, which only consisted of advertisements, bills, and orders he was sent for merchandise. He said that he bought even his shoes by mail.

Dresden 1999. Brief encounter 7.

... and the last. It was probably part of my fate to have met Tom for the first time at a semiotic Congress in Europe and again, for the last time, also at a semiotic Congress in Europe. Once again, he was nearly always engaged in endless meetings. We didn't talk much. I remember that, when we met, I asked him whether Jean was also there. He said:

“No, she's working to support me”.

Finale

Fortunately, I am in the habit of sending my Christmas cards quite early, even by e-mail. Therefore Tom did receive the one I sent him, and acknowledged it. This must have been only a day or two before he died.

I am glad I had the chance to cross Tom's path for several "whiles". Never twice on the same spot, I notice.

I do not know where Tom is now, but I think he must be happy, wherever he is, for, as far as I could notice, he was a man for all places.

Chapter 26

Speaking and writing about Thomas A. Sebeok – This is a way of thinking

Maria Popova

I met Thomas A. Sebeok for the last time in Lugano. There was a Semiotics Conference in the University. We were invited by the amiable and energetic Peter Schulz to discuss some issues of semiotics, informatics and communications. The debates and the lectures were interesting and helpful. We spent the free time enjoying the beautiful landscape of the lake and the contours of the surrounding mountains. During the farewell dinner Tom, with a smile on his face told me: “Maria, this is perhaps the last time we see each other”. “But why so, I do not believe it”, I replied. He said: “Maria, I will not travel to Europe any more. It is so hard for me. We could meet in the States if you come, but I know you have some fear of flying”.

He was right – we did not meet ever again.

In this essay, I wish to share my memories of Thomas A. Sebeok, and particularly those activities of his dedicated to the creation and the development of the Bulgarian semiotic school.

I met this phenomenal scientist many times at different places – Perpignan, Barcelona, Budapest, Berkeley, Dresden, Thessaloniki, Imatra, Urbino, Helsinki. However, I will recount with peculiar feeling his four visits to Bulgaria.

The first visit took place when Tom was only seven years of age, in the company of his father. He told me that his memories of that visit are vague, but they inspired in him a wish to come here again. This was to happen immediately after the fall of the Berlin wall.

Just before his second travel to Bulgaria, Tom and I became acquainted in Perpignan, at the IASS Congress. The place was overcrowded, and I met people I knew only by their publications and books, people with many of whom I subsequently became friends. Nevertheless, the first to

show interest and consideration towards our Bulgarian group was Thomas A. Sebeok. He was interested on the activities of our newborn semiotic society, and enlightened us on how to become members of the IASS.

Barely a year later, Tom was our guest in Sofia. He lectured in the National Palace of Culture. All the seats were filled, with students sitting on the floor.

New Bulgarian University was founded in 1991. I was invited by its President – Prof. Bogdan Bogdanov to be a member of the Academic Council in charge of creating the conception of the development of this University as modern, humanitarian, democratic, and open towards European educational values. In the composition of the new programs and courses, semiotics took its already established place. I say “already established”, because a Bulgarian tradition of semiotics had already become known in Paris and established among the human sciences through the work of two Bulgarian emigres from the Soviet period, Tzvetan Todorov and Julia Kristeva. Here I should mention also the name of the Bulgarian philosopher Professor Ivan Sarailiev, who, in his 1938 book, *Pragmatism*, for the first time in Eastern Europe published and debated the ideas of Charles S. Peirce.

In 1993 the semiotics courses of New Bulgarian University began. In 1995 the Master and Doctor programs were added. I continuously coordinated these developments with Thomas A. Sebeok. He was more than a consultant, he was the most eager promoter of our programs within the global semiotics community. Tom attracted the most prominent semioticians as lecturers here. They in turn became our friends and supporters – John Deely, Eero Tarasti, Susan Petrilli, Augusto Ponzio, William Watt, Patrizia Calefato, Paul Copley, Alexandros Lagopoulos, Karin Boklund, Peter Schulz, Kalevi Kull, Winfried Noeth. I could go further. . .

In 1995 we founded the Early Fall School of Semiotics. So far, it has been held for fourteen Fall seasons. Tom was one of our first guest-lecturers. For my colleagues and for me, Thomas A. Sebeok was a singular symbol of our “semiotic academic being”. That is how, in a very natural way he became the first “Doctor Honoris Causa” of the New

Bulgarian University. His ceremonial lecture will be remembered both for its deep academism and for its spontaneous collegial humour. Later, it was published in an anthology named “The Rose Garden”, along with other of his essays.

Tom was our academic guest three times. At his second trip in 1992, he was accompanied by his daughter Erica, as part of a visit to Greece on invitation of the Greek Semiotic Society. Our semiotic team subsequently packed up and headed with Tom to Thessaloniki, where we became guests of Prof. Alexandros Lagopoulos and the Semiotic Society there. During one of the dinners, on the terrace of the magnificent villa of Prof. Kiriaki Tzukala, high above in the suburbs, under the starry Greek sky, Thomas A. Sebeok proposed the idea to create a Balkan Association for Semiotic Studies. That is how BAAS was born, and Prof. Lagopoulos was engaged with its organization and presidency. It was one of Tom’s great ideas, one so far only partly realized. I hope for its further development as part of the abundant heritage of Thomas A. Sebeok in this region of Europe.

New Bulgarian University published Tom’s first book in Bulgarian – his *Semiotics in the United States*. He wrote a foreword part of which I am tempted to quote here:

... My youngest daughter Erica and I were the only “strangers” privileged to be invited on the merry feast in the Greek province, at the foot of the magnificent Olympus mountain. There I surprisingly got aware that I have been elected Honorable member of the newborn BAAS. I remember that in my speech on the occasion I urged for timely collaboration with our colleagues from Romania and Turkey.

From Thessaloniki, via Crete and Athens, my daughter and I flew to Sofia. ... In the fall of 1992 I had a lecture, there before an audience. The radio and several newspapers interviewed me. That is why I was extremely surprised and proud to be invited again in the spring of 1996 by my more and more friends there to be given the first title Doctor Honoris Causa of New Bulgarian University. I take this opportunity to express once again my gratitude to the President of the University Prof. Bogdan Bogdanov, the Rector – Prof. Ivanka Apostolova and the Dean of the Free Faculty Prof. Maria Popova for the honor I was awarded.

I wish to add something to my speech though. It deals with my impression of the state of the semiotics in Bulgaria with a focus on its development and my colleagues' efforts in the training process as well as the organizing of the annual Early Fall Schools where a lot of foreign lecturers and students attend and enjoy the Bulgarian nature and culture. It is obvious that Prof. Maria Popova and her collaborators guarantee the participation of prominent semioticians. I would like to congratulate my Bulgarian colleagues and friends for their creativity and ideas for the future and to wish them good luck through all this process.

After these words of Tom's, the only thing I could say is "Thank you, dear Tom, we have not let down your hopes about our efforts in semiotics!".

I will not write about the theoretical contributions of Thomas A. Sebeok. A lot has been written about them, and more will be in the years to come. The whole of his creative story is full of thoroughness, tolerance towards his colleagues, the view that the science is done by individuals as well as by the larger societies, developing huge potential. To the huge potential of semiotics Tom dedicated the many years of his life.

I keep in the archive of my electronic mail the whole of my correspondence with him, including some brief remarks made in a hurry, pieces of advice that were of greatest value for me. The exhaustive bibliography of Thomas A. Sebeok takes the place it deserves on my bookshelves.

It is clear that it is impossible to analyze or present the conceptions of Thomas A. Sebeok in a single essay. To this task many of our colleagues in semiotics have made a contribution – I may mention with great respect, but without in any way being exhaustive, John Deely, Susan Petrilli and Augusto Ponzio. However, I wish to quote two sentences from the heritage that Thomas A. Sebeok left to us:

... Semiotics is not a model, which could go "out-of-date", neither is it a theory that could be denied, nor a point of view that can be overcome. It is a way of thinking that can exist only if renewed permanently and with respectful awareness of its roots.

In 1992 I participated in a Conference, organized by the International Center for Semiotics and Linguistics at the University of Urbino, Italy. There, Thomas A. Sebeok arranged a comprehensive seminar discussion

on his book *Semiotics in the United States*. Here is a passage from Tom's remarks with which I wish to conclude:

I here repeat that semiotics' overriding mission is and will be to mediate between reality and illusion, to penetrate to the illusion behind reality – these being complementary universes of signs – to decompose it, demystify it, and, in back of that, unveil yet another reality, of a texture richer still.

Chapter 27

Summing up: In lieu of an introduction¹

Thomas A. Sebeok

Tell all the truth but tell it slant Success in Circuit lies . . .

Emily Dickinson c.1872

My academic prospects took wing when Dean Richard P. McKeon excommunicated me from the University of Chicago's Division of Humanities. This happened in the fall of 1940, more or less coincidentally with Leonard Bloomfield's assumption of a Sterling Professorship at Yale. The two events were connected. The next paragraphs tell how.

Bloomfield – who himself was born in Chicago and had received his doctorate from the University of Chicago in 1909 – was chairman of the Department of Linguistics from 1934 until his departure for New Haven in 1940. During my senior year, I enrolled in his introduction to linguistics as well as studied Old Icelandic with him. Both these classes were minuscule, so I had regular opportunities to consult with him one on one. He encouraged me to continue working with him after my graduation. Indeed, he went so far as to discuss with me possible lines of independent research leading, in due course, to a dissertation topic. Aware that my mother tongue was Hungarian, he sensibly argued that I should pursue a specialization in Finno-Ugric (*viz.*, Uralic) linguistics, and initially assigned several recent publications on the Hungarian language for me to review. Some of my essays, as on Robert Hall's outline of Hungarian structure, were in the nature of quite lengthy term papers written for his

-
1. This manuscript was written by Thomas Sebeok around the time of his final preparation for publication of his book, *Global Semiotics* (2001). It tells a dramatic story of his entry into graduate studies along the path which eventually led to his encompassing interest in the semiotic enterprise. The manuscript was discovered when John Deely and Jean Umiker-Sebeok were sorting through Tom's papers, after his burial. We have no idea what Tom's plans for this manuscript were, except that it tells a tale he wanted known; besides which, it fits nicely into this memorial volume as a final vignette from Tom's own hand concerning his beginning of graduate studies at the University of Chicago, where he began his "turn to semiotics".

eyes only. Others, as of John Lotz's masterly *Das Ungarische Sprachsystem* and of Leslie Tihany's pedestrian Hungarian grammar, Bloomfield recommended for publication in *Language*, where Bernard Bloch published both pieces in 1942.

Bloomfield's influence on my earliest researches was positive, but not decisive. My eventual thesis subject, devoted to Finno-Ugric case systems, was adumbrated in discussions with him, but worked out several years later, when I was already in Princeton, under the far more trenchant sway of Roman Jakobson, who was then still at Columbia. However, my first two books, the one on *Spoken Hungarian* (1945), the other on *Spoken Finnish* (1947), both were abetted, inspired, as well as tactfully facilitated, by Bloomfield, whom I last visited at his office in Yale when he was slowly recovering from a debilitating stroke of which he was to die in 1949. I discuss my further, later engagements with Finno-Ugric studies in a pair of complementary chapters in *Global Semiotics*; too, the account of "The Estonian connection" preceding them there bears on related aspects. In that book I do not, however, touch on my many years of involvement with Mari (Cheremis) language and culture, about which I have written amply elsewhere, or on my summer's fieldwork a long time ago, now moot, with the Saami (Lapp) people of Arctic Finland. The spur for these lay in other venues.

Before returning to the whys of my banishment from the Division of Humanities, I want to stress Bloomfield's scarcely appreciated, withal quite explicit, links with semiotics, especially during his final Chicago years. In 1939, he declared not just that "linguistics is the chief contributor to semiotic", but also that the notion of "meaning", which he was alleged by some of his detractors to have neglected even as his negative views as to semantic matters were grossly overblown by some of his epigones, "is necessarily inclusive, since it must embrace all aspects of semiosis that may be distinguished by a philosophical or logical analysis; relation, on various levels, of speech-forms to other speech-forms, relation of speech-forms to non-verbal situations . . . and relations, again on various levels, to the persons who are participating in the act of communication". The mantle of Rudolf Carnap and Charles Morris, Chicago colleagues of his (and both, incidentally, teachers of my own) couldn't be more overspread and is, moreover, rendered manifest by patent references to their works in his now hardly remembered monograph, *Linguistic Aspects of Science*.

McKeon was appointed dean of the humanities division in 1935, where he reigned until his resignation in 1947. I first glimpsed the dean attending a seminar by the poet Elder Olson when I was there, a lowly teen-age undergraduate. I can't remember what Olson spoke about, but distinctly

recall McKeon's formulation opening the ensuing debate: "At the risk of offending you...". It is not my place here to characterize McKeon (Robert Pirsig's colorful semi-fictional 1974 portrayal in *Zen and the Art of Motorcycle Maintenance* captured how he had impressed Phaedrus "with great quickness of mind, and an equally swift temper" as well as his turgid prose) but only to recount what Bloomfield disclosed and how events touching me unfolded some months afterwards.

One day in the late spring of 1940, the usually reserved Bloomfield called me into his office to inform me of his resignation and his pending departure for Yale. He told me of his and his wife's pronounced reluctance to leave Chicago. He had offered to stay at Chicago if only the dean would assure him of appropriate clerical assistance he felt he needed to carry on with his double duty as the head of two departments, German and Linguistics; but McKeon refused even that modest request. I don't know whether Bloomfield had any inkling of the true reasons for McKeon's unresponsiveness to him, this illustrious pillar of the American linguistics establishment (reverberating perhaps the persevering hostility of President Hutchins to Carnap and Morris, thereby setting back the nascent rise of semiotics in this country by easily a quarter of a century). McKeon's conception of linguistics envisioned this field – to phrase the matter most brutally – as lodged within a medieval trivium of grammar, logic, and rhetoric, reduced, at best, to a set of vexing "tool courses" on a par with the likes of mathematics. So Bloomfield was *a-priori* a marked man in McKeon's book, which may also account for the fact that, some years later, he likewise refused to approve Roman Jakobson's highly recommended appointment after his very well received guest lectures there.

Bloomfield was not of course gossiping idly, let alone baring his soul, but gently letting me know that he would be available no longer to mentor my studies beyond the Spring Quarter. He further informed me that the dean would himself be acting as the *ex officio* head of the department of linguistics and that, henceforth, until instructed otherwise, I was to report to him to guide my graduate studies. Since I was uncomfortable with McKeon, this news was hardly gratifying, but, as it was now almost the end of the school year, I decided to do nothing until the 1940 Fall Quarter.

Come September, however, I could no longer put off seeing my new chairman, so I was obliged to now call on McKeon in his new capacity. The divisional student body being relatively small at the time, he knew me at least by sight. I began by explaining that, as a (actually, I think the only) linguistics major that year, I needed to enroll in some courses but was unable to find any in the catalog, so came to seek his advice. I asked

him if there was a replacement for Bloomfield in sight. My questions seemed to incense him. I remember his answering me gruffly: "Don't concern yourself with matters that are none of your business. Leave the running of the division to me". I was offended as much by his manner as by his evasiveness and answered, I still think reasonably: "I can hardly continue as a linguistics major without taking some courses in linguistics!" McKeon then swiveled his chair to pick a book off his vast bookcase, turned around, and tossed it with a thump onto his massive desk, practically roaring: "Read this book. After you have memorized it come back to be examined". To my astonishment, I saw that the book he bid me to commit to memory was none other than Bennett's Latin grammar, surely familiar to school children since the 1890s. Close to exasperation myself, I started to review certain highlights of my previous education: comprehending eight years of Latin in high school followed by two more in College, climaxing in my appearance in a Latin stage production of "Miles Gloriosus" in New York in 1939. At this point, the dean lost his temper, bellowing at me: "Get out!" I started for the door, exploding: "Mr. McKeon, you are a son of a bitch". His last words I caught, as I slammed the door, were: "You are expelled from linguistics, you are expelled from my division." . . .

Before I continue with the main line of this narration, I want to mention two subsequent sightings of McKeon. The first trace of a cameo appearance occurred after I had already been serving for three years as a member of the Indiana University faculty which I was invited to join in 1943. One day, I was seeing President Herman B Wells, the man who had hired me, on some administrative business in his office. Just as I was leaving, he remarked, "Oh, Tom, I have just been reading about you!" "How is that?" I asked. "Do you remember a man named McKeon? Well, I just received a letter from him about you". The letter, which Wells shared with me – written when McKeon's influence at Chicago was at its apex – was a petty, vindictive denunciation, a patronizing word to the wise, upbraiding Wells for having hired a ruffianly character such as me. I asked him what he proposed to do about this venomous missive. He replied with a chuckle that McKeon's letter would be placed into my dossier – where, so I assume, it must now be reposing in this university's Archives – in the expectation that it would strengthen my case for a promotion.

My next, last, and, yet all but quotidian encounters with McKeon took place at the Center for Advanced Study in the Behavioral Sciences. (I was back in Stanford in 1966–67 and again in the summer of 1971.) As Ralph

W. Tyler, the Center's founding director, would it seems have it, McKeon and I were fated, after we both landed in Stanford about July of 1960 through spring's end in 1961, to enjoy overlapping terms as fellow-Fellows of that prestigious research institution. I had come to know and highly respect Tyler at Chicago, where he had in 1946 become acting dean of the social sciences division, succeeding Robert Redfield – of whom more in a moment. (In 1992, the University of Chicago's Centennial Year, I was deeply touched to share with Ralph a Professional Achievement Citation bestowed upon each of us by President Hanna Gray in the same moving ceremony at Rockefeller Chapel, at the very same spot where President Robert Maynard Hutchins delivered my graduation diploma in 1941, with the memorable words, "I hand you this sheepskin to cover your intellectual nakedness".)

I was shocked to mark by how much the recently widowed McKeon had aged in the two decades since our shouting match in Harper. He had palpably lost his edge and exuberance. At any rate, he had either forgotten me or, as I prefer to imagine, pretended to. Our relations stayed unremarkably "correct" during the months we were thrown together at the Center. He evidenced no curiosity about my work, nor any interest in the labors of the other linguists in our class, which included Roman Jakobson and his student Morris Halle, the Polish Jerzy Kurylowicz, the Norwegian Alf Sommerfelt, and several eminent linguistically inclined anthropologists, such as Edmund Leach. We linguists conducted frequent seminars, which were open to all other Fellows, but I don't remember that McKeon ever took part.

In 1959, I happened to attend a cocktail party in California where by pure chance I ran into Tyler. To my astonishment, he informally, on the spot, invited me to become a Fellow at the Center. I wondered, but did not ask him, who had nominated me. Well into the following year, he told me that I had been proposed, it seems independently, by three anthropologists: A.L. Kroeber of Berkeley, Clyde Kluckhohn of Harvard, and Robert Redfield, my most recent dean at Chicago. I dwell on these at first glance commonplace autobiographical minutiae for a very special reason: my ultimate transfiguration from a linguistic technician to a practicing semiotician was set in motion at the Center for Advanced Study. Accordingly, my indebtedness to my trio of primordial anonymous sponsors and of course to my upholder, Ralph Tyler, remains abiding and momentous.

After this meandering detour, I now return to the events that shortly followed upon my banishment from McKeon's turf at Chicago. I still wanted to continue to study linguistics, but clearly I had to find a welcom-

ing venue. I turned for advice to my well wishers on the faculty, notably Charles Morris, who pointed me in the direction of anthropology professor Manuel Andrade, securely lodged in the social sciences division. Andrade was one of Franz Boas' linguistics students, an expert on Quileute (a language of the Chimakuan family), who had been hired by Chicago to work with Mayan languages of Guatemala. Andrade, a shy man but exceptional teacher, was at the time working out, in his typically solitary fashion, a potentially fertile, semiotically pitched theory of grammar, bits of which he was presenting in a lecture course for which I was presently to sign up. But first, a down and out refugee from linguistics, I needed to be admitted to anthropology. (Impoverished, yes, but not altogether destitute: I lived with my father just south of the Midway on 61st Street, and reveled in a wonderful job at the *Dictionary of American English on Historical Principles*, assigned to leisurely read – often at Chicago's great Newberry Library (of which, by the way, I was made a Fellow in 1955) – highly entertaining 18th and 19th century accounts by European travelers. I was to keep a sharp eye out for “Americanisms” and pass them on in context to my supervisor, Mitford M. Mathews, as raw materials for his index to the history and culture of the American people.)

So, with considerable trepidation, I went to see Fay-Cooper Cole, the founder and longtime head of the Department of Anthropology. I was aware that Edward Sapir, one of the most accomplished American linguists of all times, had graced the department with his presence after the mid-1920s, before his own departure for Yale as a Sterling Professor in 1931. But other than that, I knew next to nothing about the department. In the event, Dr. Cole received me with guarded cordiality. I set forth what had happened and asked if despite my disgrace as a humanist I would be countenanced by the community of social scientists. Cole did not respond to me but spoke into his phone: “Bob, can you come up here? There is a student in my office seeking admission. I think this is one story you will want to listen to”.

In a few minutes, a lanky, austere, elegant gentleman appeared. This was my first meeting with the formidable Dean of the Division of the Social Sciences, Robert Redfield. He took a seat to the left of Cole, who bid me to repeat my by now well-rehearsed apologue. Feeling caught a bit between farce and annihilation, like Kafka's Josef K, I lurched ahead once more. When I finished my confession, there was a moment of total silence. The two men looked at one another and then began to roar with laughter. Redfield rose, shook my hand, said “I look forward to having you as a student”, and left the room. (I later took an enlightening survey of con-

temporary anthropology with Redfield, from which I profited immensely. For some reason, I conjure up at this moment an elaborate chart he once scribbled on the blackboard, positioning American cultural and social anthropologists in various boxes, none of them, however, containing Kluckhohn. I asked him about this, and recall his answer: "Oh, Clyde is all over the place".

This, in a nutshell, is how I became an "anthropological linguist", a nugatory term that didn't gain circulation until after World War II. I liked the company of anthropologists and befriended many, including especially Fred Eggan, Sol Tax, Milton Singer, now alas all deceased. In due course, Dr. Cole nominated me to become Fellow of the American Anthropological Association (1950), and, in 1984, I was honored with the Association's Distinguished Service Award.

On the other hand, a couple of months after I embarked on my studies in anthropology, my linguistics career suffered another serious blow. At the outset, Andrade had consented to take me on as his advisee and agreed to become the supervisor of my M.A. thesis, which was already close to being finished. Our personal relations were most comfortable. I fell into an agreeable habit of walking him home toward the lake along the Midway after his late afternoon classes. One mid-term morning, I was shocked and devastated to read a notice on our departmental bulletin board that Andrade had suffered a coronary thrombosis the night before.

Yogi Berra's dilemma became mine too. Notably, he urged: "When you come to a fork in the road, take it". I could have opted, as I was seriously tempted, to shift to another concentration within anthropology, namely, physical anthropology (now more commonly called "bioanthropology") with Marion Krogman, but this subfield's then excessive reliance on anatomy put me off. Throughout my Chicago years, I was strongly drawn to the natural sciences in general, the life sciences in particular. Inspired by an innovative, zealous, and passionate teacher, Joseph J. Schwab, a geneticist by training, I began acquiring the rudiments of what J.B. Woodger called a "biological way of thinking". (A book I published in 1972, *Perspectives in Zoosemiotics*, was indeed dedicated to Schwab.) The logical patterns that characterize this mode of thought were instilled in me by a truly remarkable constellation of scientists who at the time enriched Chicago's division of biological sciences. I believe that my work in semiotics is variously informed by a "bio-logic", as readers of this book can judge for themselves, and as I hope may become clear from an inspection of the first half a dozen chapters. But that in the end I remained a biologist *manqué* instead of a working life scientist was due to two main

reasons, first, owing to my incompetence at the bench, and, second, because of the ever mounting pressures, of which more below, brought about by the fateful events of December 7th, 1941.

In the short term, simple workaday circumstances impelled me to go down a quite different path, squeezed by crass pecuniary reasons. It so happened that an Italian scholar in exile, Giuliano Bonfante, at that time regularly ensconced at Princeton University, became a Visiting Professor in Romance linguistics at Chicago for the 1942 Spring Quarter. Although offered in the humanities division, his courses were open even to renegades such as myself, so, as I needed an outside minor, I decided to enroll in one of them, titled I think "Neolinguistics". Bonfante was erudite and colorful, but something of a professional misfit on the American academic scene. This coupled with the fact that he was sixteen years my senior notwithstanding, we became amenable companions. Once I whined to him about my inability to obtain financial aid from my department, in which there were some sixty, mostly needy, other graduate students at the time. I was told by Dr. Cole that there was only a single fellowship at his disposal, which could be allocated either to an archeologist or a social anthropologist, but certainly not to the department's sole linguist. Bonfante offered to explore possibilities at his home institution. In a short time, without ever having been required to place a formal application, I received an offer of a Jane and Elizabeth Procter Fellowship, much too remunerative to refuse, from Princeton's Department of Oriental Languages and Civilizations. This included free tuition, a three-room tower suite overlooking a golf course from Princeton's Graduate College, with a substantial breakfast, plus a generous stipend for added living expenses.

In principle, my department housed instruction in general linguistics, which was offered by the head, Professor Harold Bender. This, however, appeared to consist of only one course, elementary Sanskrit. (I already had two years of Sanskrit at Chicago with a certain Prince George V. Bobrinskoy, who was the tennis champion of the Quadrangle Club until beaten by my Orientalist friend Jay Gelb.) Bender was an elderly gentleman who suffered from severe agoraphobia, so his students were obliged to go to his house several evenings a week to attend his readings, while Mrs. Bender served us coffee and cookies. I use "readings" advisedly. The professor himself had studied Sanskrit in Berlin at the turn of the century. He had taken careful notes, which he recapitulated to us verbatim, i.e., in the original German. For me, this was not a problem, but posed a grave predicament to the only other student in the class, a courtly middle-aged Chinese gentleman who also lived in the Graduate College.

His name was Mr. Yu. This hapless fellow, having landed quite recently in New Jersey, knew very little English and no German at all; moreover, Yu had not the faintest interest in Sanskrit. But he had no choice. To accommodate Yu, we worked out the following *modus operandi*: in a monotonous voice, Bender delivered his German commentary on portions of Whitney's Sanskrit grammar; I converted these into English and passed on in summary to Yu, who laboriously transcribed my translations into Chinese characters, rendered them in broken English which I smoothed out and passed back to Professor Bender as the beginning of our next night's class. For these services, I was well paid, but not enough to make up for my boredom.

In my ample free time, I collaborated with Bonfante on a paper on "Linguistics and the Age and Area Hypothesis", which Ralph Linton published in the *American Anthropologist* (1944); took up Chinese studies; and, socially, fell back on the companionship of an immensely learned and witty Italian Arabist, Giorgio Levi della Vida. In the spring of 1943, I received my M.A. All the while, I was also tinkering with my doctoral dissertation.

Trouble was, there was really nobody at Princeton competent to supervise my efforts. I therefore purchased a season pass on the Pennsylvania Railroad enabling me to commute from Princeton to New York City for frequent consultations with Roman Jakobson who, at the time, was teaching at the *École Libre des Hautes Études* (in exile, at the New School for Social Research, where I myself gave lectures on the history of the Hungarian language). Jakobson's impact on my linguistics studies having been pivotal – I should add at once that it was far less so on my gradual evolution as a semiotician – I have dealt with facets of this in several previous publications which I merely adduce here: in the Foreword to my monograph *Structure and Texture* (which I dedicated to him in 1974); in chapter 13 of my book, *The Sign & Its Masters* (1979, 1989); and again throughout another book, *Semiotics in the United States* (1991).

Part III. Letters

Chapter 28

Anderson letter of 13 May 2002

From: Myrdene Anderson <myanders@ecn.purdue.edu>
To: umikerse@indiana.edu (jean umiker-sebeok)
Time: Mon, 13 May 2002 17:19:30-0500
Subject: re TAS

Jean, i'm briefly in town between two "worldly" trips. from 2nd to 18th june i'll be at biosemiotics thesis defense in copenhagen, the imatra summer institute, and the tartu biosemiotics gathering. only thereafter will i get to all my mail and obligations.

I drafted the following notes immediately after your invitation to do so. this is nothing more than a speck on an ocean of recollections, feelings, and speculations associated with tom . . . all delightful. cheers, m

I discovered Tom Sebeok, first via his biosemiotics, while immersing myself in anthropology at the University of Hawaii and Yale University in the 1960s. Semiotics as a whole permeated my ethnographic soul, and it seemed that everyone must be a semiotician whether they knew it or not. It never dawned on me that I might actually meet a whole interdisciplinary bevy of capital-S Semioticians, let alone the midwife of them all, Thomas A. Sebeok, as happened at the 1983 International Summer Institute of Semiotic and Structural Studies, just down the road from Purdue, at Indiana University.

At this institute, and other institutes and conferences and meetings, at various places around the globe, I never missed the opportunities to bask in the sparkle/spangle of Tom's thoughts, which he so generously shared, in formal and informal settings. Very early in the 1983 ISISSS, Tom invited me to join a fraternity of seasoned semioticians who were to carve out time to write some sort of manifesto. Coming from Tom, anything sounded like a good idea, so, sure, why not!

The weeks of 1983 ISISSS sped by without any gathering of manifesting minds, though, until the afternoon of the final day. There we were in

one of Tom's favorite restaurants: Tom, John Deely, Martin Krampen, Joseph Randsdell, Thure von Uexküll-in-spirit, and myself. In casual conversation during previous weeks I had ascertained that none of these individuals knew what Tom had in mind, which emboldened me to imagine that I would fit right in. To my dismay, no one around the table admitted to their or our collective innocence/ignorance. And to my further dismay, Tom let everyone else off the hook when he announced that I should write the first draft of this manifesto, which would be hand-carried from peregrinacious co-author to co-author (in an international daisy chain including Portugal and Germany if not also Italy), until John Deely (and Tom) and I met at the following 1984 ISISSS in Toronto to further polish the piece, no longer called a manifesto, but "Steps to a new paradigm".

Encountering Tom in this fashion was a crash course in 20th century semiotics, and an inside introduction to the facilitator-par-excellence of the field/approach/perspective/metadiscipline. Anyone not experiencing Tom in action might assume him to be a figurehead coasting on past merits. For the rest of us, Tom whirl-winded into our minds, meals, and calendars, and whipped us into other dimensions of space and time and at greater velocities and productivities, with never a gasp or groan, because, above all else, Tom and his ideas were addictive fun.

Speaking for myself, Tom's plastic and elastic mind stretched my imagination, without effort on anyone's part. Given his brilliance and diligence, and his head-start in the last century as well as every 4 AM since, It's fortunate that there's anything left for the rest of us to ponder! Here the balloon analogy serves quite well, as Tom must have known with confidence: the greater the accumulation of content (including hot air), the greater the surface exposed to inquiry.

I'm off to inquire right now.

Chapter 29

Eco letter of 11 January 2002

Ms Jean Sebeok
1104 Covenanter Dr.
Bloomington, Indiana

Milan, January 11th 2002

Dear Jean:

I called when I heard about Tom but I spoke only with Jessica. You can imagine what I wanted to say. It makes more or less thirty years that Tom and me worked together as close friends. Moreover it was Tom who made me published in English for the first time, proving as usual his intellectual generosity. Thus Tom's death shocked me immensely and I can only remember at least his jokes (which were an important part of our scholarly activity).

I send you a copy of an article I published last week. The magazine, *L'Espresso*, makes a lot of copies but its readership is not only an academic one. That is why I had to avoid technical stuff and decided to tell a story that could be understood by a large audience. So I told the story of his research for Nuclear Waste. In any case it was a way to inform many old friends of Tom and I received many calls from people who loved him and appreciated his books.

That's all. We shall try to remember Tom in some more appropriate way in the semiotic milieu.

Be sure that you have all my friendship and sympathy in this circumstance. I hope to see you soon, so that we can talk together of this unforgettable person.

Yours,
Umberto



Tom Sebeok and Umberto Eco
toward 20th century's end

Chapter 30

Hamp letter of 2 January 2002

University of Chicago
1010 East 59th Street
Chicago, Illinois 60637

2 January 2002

Dear Jean:

I was shocked and saddened to read the NY Times this morning. I had no idea that Tom might be in poor health, though it's true that these ten years now (you know, he was just a week older than I) I'm abroad about half the year and mostly at different meetings etc. from Tom; and so I've heard only sporadic news of Tom from Budapest and the like. But I'll never think of Tom in failing health – of a dozen or three memories that crowd my kaleidoscope my favorite is probably Tom spiffily dressed, his face covered with thoughts being sorted, entering a busy room and looking for a telephone, his right index finger feeling in his breast pocket for that little two-sheet extract from his forwarding and at the same time answering multiple conflicting questions.

Tom had real style, as well as a perpetual flow of ideas. Of course, you'll miss him. But you must do his portrait – which you'll enjoy – just as he was the connoisseur of the portraits of others.

Tom branched out into ramified, interlocking other fields as no other linguist did. He painted on a bigger canvas than almost any of us dared to grope on. Tom had a nose for things, he had a serious respect for quality, would convey this to others, and then expand the output impressively. I saw it happen, inter alia, with IU Press, Current Trends (the biggest venture ever of its sort, with remarkable durative value), and 1964 Linguistics Institute; and of course the birth of Mouton. The *New York Times* should have sketched at least these things. But that's a whole facet of the value of archives, which we tried at an unlucky time to realize at the Newberry.

Be in touch.

Yours ever,
Eric Hamp

Chapter 31

Remak letter of 24 December 2001

24 December 2001

Dear Jean,

I was quite shaken by the obituary notice of Tom in yesterday's newspaper. For some time I had not seen him around, but then after we reach the biblical age and beyond we just stick around home more than we used to.

Tom, as you know, was far more than an esteemed and celebrated colleague for me. I believe, in fact, that we shared the longest, enduring friendship between two faculty members at IU Bloomington. We met some time between 1940 and 1943 when we were both students at the University of Chicago and both residents of the wonderful Burton/Judson Court student living complex on the Midway, across from the UC campus. I believe we first met playing chess with each other in the Judson Court lounge and subsequently in the Linguistics classes taught by Leonard Bloomfield and Giulio Bonfante. We were lucky to have both of them just in time, because very soon afterwards Bloomfield left for Yale and Bonfante for Princeton to where Tom followed him. We may have also met in the famous Geo-Linguistics class taught periodically by the wonderfully humanistic personality of Walther von Wartburg, whose permanent position was at the University of Basel. Then, as to this day, Chicago was/is the most elastic of all institutions of higher learning I have ever known, internally or externally, their only unnegotiable maxim being intellectual curiosity backed up by intellectual quality. Tom was free to develop there, at his own scope and pace, the kind of Linguistics that developed into Semiotics before Semiotics existed "officially/academically", and I enjoyed the same freedom with my Chicago degree in Comparative Literature before *it* existed there on paper.

So I was delighted to discover him at Indiana where I returned (this time as a faculty member, formerly I was a student there) in 1946, and our friendship has endured, without a hitch, ever since. I will never forget how helpful he was to the IU Institute for Advanced Study when I was its

Director (1987–1994, 1997–1998) by steering great scholars (Umberto Eco, Marcel Danesi, etc.) in our direction – and *repeatedly!*

But my fondest memories are having lunch with Tom, now and then, whether in the Tudor Room, at Uptown, or at Cassies throughout the years. His favorite (but, in any one period, immutable) place of eating, as well as for the ungodly time when he insisted on having lunch (11:00, or no later than 11:30 – perfectly normal for anyone who, like he claimed he did, got up at 04:00 am !! but not for us other mortals ...) were un-negotiable. But, in return, the conversation topics brooked no limits – unlike his daily living habits which, to put it mildly, were highly disciplined.

Indiana University is still – for students, faculty, and citizens, who are willing to take advantage of it – an effervescent center of learning, of intellectual/artistic enjoyment, formal and informal, but I believe it is not just romantization of the past to say that both Tom and I were here to be part of – and to *enjoy*, for joy in the play of the intellect is (or should be) part of not only *learning* but of *Learning* – part of the *Golden Age* of Indiana University associated with the spontaneous, encompassing, humanistic love of learning of Herman B. Wells which attracted *and retained* learners/teachers of a caliber – like Tom's – who, in those years, could have gone – or moved – to other comparable institutions. And, of course, this *inner* commitment, this community spirit was also – and inevitably – reflected in externally recognized work of professional distinction.

We are grateful that we had – and kept – Tom for as long as we did, and the Remaks as a family are equally grateful to have had – and to having – the Sebeok family, too.

Affectionately,
Henry H. H. Remak

Chapter 32

Watt letter of 5 January 2002

48 Schubert Court
Irvine, California 92612

January 5, 2002

Dear Jean,

I should say at the outset that this is written still in shock at Tom's death, and in a deep sense of my inadequacy at expressing my feelings.

I do want, though, first of all, to condole with you and Erica and Jessica on this most lamentable event. I'd expected, and God knows wanted, Tom to live on for many many years yet, and on the occasion of his 80th birthday, celebrated with well-deserved pomp and ceremony at IU in February, I had every reason to think that he would. So much so that I'm nowhere near being able to accept his passing, even though he was in his 82nd year. He had so much yet to live and give, so much yet to accomplish, so many wonderful and exciting and fruitful things yet to think and write. His gifts to the scholarly world hadn't even come close to being exhausted, and the field of semiotics hadn't come near, as if it ever could have, to no longer needing him: his wise counsel, his ever-unassuming leadership (more accurately, his *doyen-ship*), his incredibly deep and comprehensive and available learning, his unfailing kindness and easy but continual and broad amity. To put it more personally, I can't now imagine my own feeling for semiotics, or my own writing, as continuing without knowing that anything I wrote would fall under his benign but ever-discerning eye. More personally still, I can't imagine a world without Tom.

I know that neither you nor his daughters can do the same, and I can only yield to you all in the depths of your grief and loss.

We are all schooled to believe that 'nobody is irreplaceable,' but this applies to Tom less than to anybody I've ever known in any field within my competence. Certainly, for instance, I've lamented the loss of my teachers Zellig Harris and Paul Garvin, but though I loved and honored them both, neither occupied the essential place in his field (or in my heart)

that Tom did. In a sense that Charles Peirce might well have envied, Tom was the center, the focus, and the fulcrum of his field, by his own incisive writing and scholarship (when will either ever be equaled?) and by his commitment to his fellow-searchers and friendly relations with them all. Speaking only for myself, my own activities in linguistics and semiotics would have been altogether different, and far inferior, without Tom's sterling and unmatched example and his encouragement at both good and difficult times. And my feeling for semiotics would have been far lesser without his friendship over the many years I knew and admired him. I know I speak for many others in expressing my feeling of professional and personal loss. I loved him as a friend while still honoring him as my mentor and (impossible-to-equal) exemplar.

I miss and will miss him terribly. I can't imagine how things will be without him or how any national or international meeting will be without the chance to give him a welcoming and parting abraço (here I revert to his beloved Portuguese). So any words will and must be inadequate, and I know that your and his daughters' loss are and will be far beyond any words of mine in any case. And yet, I think, our continuing, however impoverished will be the legacy he would have wished. And so we will, somehow, with Tom ever in our minds and hearts.

I wish you well, Jean, I wish us all well, lessened but fortified by his example, and resolute.

With love,
Watt

(W.C. Watt)

Part IV. The Tartu connection

Chapter 33

The Tartu connection: Thomas Sebeok's correspondence with Juri Lotman

Tuuli Raudla and Tanel Pern

Sebeok and Tartu – Introduction

The aim of this brief paper is to give an overview of Thomas Sebeok's letters to Juri Lotman, one of the leading figures of the Tartu-Moscow school of Semiotics. There are several reasons for our interest in this topic. One of these is Sebeok's special relationship to Estonia, an account of which he has given in "The Estonian connection" (1998). His letters to Lotman help to shed a bit more light to this relationship. They are also important documents about the life of Thomas Sebeok – as well as about the history of 20th century Semiotics.

The correspondence dates from 1967 to 1991. Altogether, there are 26 missives (see Table 1), among them also postcards and one telegram. Most of these concern editorial matters (this is also noted by Sebeok in "The Estonian connection"). There is reason to believe that not all Sebeok's letters to Lotman have been preserved: among the missives in the archival folder were found two envelopes with a date on them, but no letter from that date; Lotman's colleagues recollect that he was "very careless" with his archives (Lotman, Uspenski 2008: 7). Despite the efforts of several people, we have also been unable to uncover the other side of this correspondence, Lotman's letters to Sebeok. A few of these "missing links" can be reconstructed based on Lotman's letters to his friend and fellow semiotician, Boris Uspenski (Lotman, Uspenski 2008).

We have divided this overview of Sebeok's letters into three sections: the first of these deals with editorial matters of *Semiotica*, the second with the arrangements for Sebeok's visit to Estonia in 1970, and the third with the exchange of scholarly works.

Editorial matters

It seems that Sebeok accepted the position of the editor in chief of *Semiotica* quite tentatively, with caution, thinking it possible to leave the

Table 1. An overview of Sebeok's letters and postcards to Lotman

Date	Contents
Dec 6 1967	Letter: Sebeok accepts the editorship of <i>Studies in Semiotics</i> , asks Lotman for cooperation
Feb 13 1968	Short letter: Jerzy Pelc replaces Skalmowski on the Board of Editors of <i>Studies in Semiotics</i> ; "look forward to seeing you in Warsaw"
Jul 2 1968	Postcard, thanking for <i>Semiotics III</i>
Aug 19 1968	Postcard, thanking for <i>Terminologia Indiacae I</i>
Feb 10 1969	Letter welcoming Lotman to the editorial council of <i>Semiotica</i> , asks for a list of potential contributors
Dec 15 1969	Short letter; arrangements for Sebeok's visit to Estonia
Jan 29 1970	Short letter; arrangements for Sebeok's visit to Estonia
May 13 1970	Postcard, acknowledging Lotman's letter informing about his change of address
May 27 1970	Postcard, accompanying the issues of <i>Language Sciences</i> sent to Lotman
Jan 11 1971	Letter; new year's greetings from Thomas A. Sebeok and Jean Sebeok
Feb 15 1971	Letter; arrangements for publishing collection of articles of Tartu-Moscow semioticians; thanking for "La structure du texte d'art" and "Articles sur la typologie culturelle".
Apr 12 1971	Postcard thanking for "Ancient India" and "Keele modelleerimise probleem 3.1"
Jun 15 1972	Postcard, thanking for "Analiz Poeticheskogo Teksta"
1973 (undated)	Questionnaire for <i>Semiotica</i> (not returned)
Feb 28 1974	Letter to Cesare Segre cc: editorial committee, confirming his intention to retire as the Editor-in-Chief of <i>Semiotica</i> (effective June 6)
Apr 29 1974	Letter from Netherlands, regarding the choice of the new editor-in-chief of <i>Semiotica</i>
Jun 11 1974	Letter announcing Lotman's reappointment to editorial committee of <i>Semiotica</i>
Jun 17 1974	Letter to editorial committee, asking their opinion on special issues of <i>Semiotica</i>
Nov 26 1974	Postcard; received offprint of <i>Myth-Name-Culture</i> by Lotman and Uspensky

Oct 15 1977	Telegram: Lotman elected honorary member of Semiotic Society of America
Apr 18 1978	Postcard thanking Lotman for two autographed books
Aug 27 1980	Postcard tanking Lotman for Semeiotike 11
Nov 7 1983	Postcard thanking Lotman for "your journal"
Jan 10 1986	Questionnaire, to be published in late 1986 issue of Semiotica
Aug 7 1990	Jean Umiker-Sebeok asks Lotman to write a review of Segre's Introduction to the Analysis of the Literary text
Apr 1 1991	Letter, reply to Lotman's letter asking for paper for printing <i>Trudy po znakovym sistemam</i>

position soon. He writes to Lotman: "[I have been asked] to take prime editorial responsibility for Studies in Semiotics, and I have accepted this assignment at least until the journal can become independent, i.e., hopefully at our Warsaw meeting of August next. "[1]¹ In February 1969, he welcomes Lotman to the editorial council of the newly founded *Semiotica* [6].

In 1974, Sebeok seems to be determined to resign. On the 28th of February 1974, Sebeok writes to Cesare Segre (cc: editorial board – including Lotman): "I now formally confirm my intention to retire as the editor-in-chief of *Semiotica* effective June 6, or, /that is/ with the completion of my work with vol. 13, No. 4, which is to be the last issue of 1974." He adds that he intends to continue editing the Approaches to Semiotics series. The letter does not indicate any reason why he was going to give up editing *Semiotica* at that moment. Soon (April 29 1974), there is a personally addressed letter [22] to Lotman confirming – probably as a reply to some Lotman's letter expressing concern for the future of the international community of semiotics, the hard to achieve communication between the soviet and western semioticians – that Sebeok would favor as his successor a person "dedicated to continue building bridges among semioticians of various intellectual viewpoints, and to forging links among workers of all countries." He says those were his principles as the editor-in-chief and adds: "I would not like to see them ignored or neglected." This he wrote despite having declared that he will abstain from the

1. From hereon, numbers inside square brackets refer to the numbered pages in Lotman's epistolary archive, Tartu University Library, F. 135, s.Bs1281.

selection process of his successor. However, the question of resigning is dropped after that. None of the later letters to Lotman address this question.

Some other official matters are also discussed in these letters. A memo from 11th June 1974 [23] announces that Lotman has been reappointed to the editorial committee of *Semiotica*. A telegram from 15th October 1977 [26] lets Lotman know that he has been elected as an honorary member of Semiotic Society of America (with personal congratulations from Sebeok, the Society's executive director). Among the last letters are a questionnaire for the late 1986 issue of *Semiotica* [32] and a request for a review of Segre's *Introduction to the Analysis of the Literary Text* [33].

Meeting in person

Before 1970, when Sebeok was able to meet Lotman in person, the correspondence between Sebeok and Lotman was rather formal – as Sebeok himself has mentioned in his “Estonian Connection”. All the warmth and friendliness in Sebeok's letters is that of a scholar addressing a colleague whom he knows only by reputation and maybe his works. Nevertheless Sebeok is all hope and expectation – he repeatedly asks Lotman to send articles by him or his colleagues. “May I add that the most concrete form of collaboration betokening your concern for the journal would be an article from you; I warmly welcome one or more, in the near future.” [6]

Sebeok writes in “The Estonian connection”, that

I felt an urge to seek every opportunity, to pursue any opening, to get to know professor Lotman in person, and preferably to visit him in his adopted domestic setting, which was then a singular Mecca-like *field* for us “pilgrims” laboring in the *domain* of semiotics. My first chance came in 1970, and Academician Ariste² turned out to be the provider of, as it were, an unassailable convoy to Tartu. The framing event was a call I had received to address, in Tallinn, an international congress in Finno-Ugric studies. (Sebeok 1998: 25)

The dates coincided with the Fourth Summer School on Secondary Modelling Systems: August 17–24, 1970 (Sebeok 1998: 25):

Thus I immediately contacted Lotman, who had indicated that we would be cordially welcome at the Summer School, provided we could ourselves secure the necessary papers.

2. Paul Ariste (néé Berg), 1905–1990. Estonian linguist; at that time, the head of the Faculty of Finno-Ugric and Estonian Linguistics.

In his letters to Lotman the plans are described:

Professor Ariste tells me that I must arrange my trip to Tartu through Intourist, in the U.S.A. What I would like to do is to travel from Tallinn to Tartu on August 23rd, to spend the 24th with you, and to leave on the 25th.

I shall contact Intourist immediately, but it would be helpful if I could obtain a formal invitation from the University of Tartu. Can this be arranged without too much inconvenience?

In any case, I look forward to this opportunity the Congress will afford to meet you and your associates. [7]

The letter is dated 15th December 1969. The next letter indicates that Sebeok's plans may not work out (January 29, 1970):

Thank you for your very kind letter of January 16th.

Unfortunately, Professor Ariste's letter, countersigned by Professor Sõgel,³ dated December 2nd says precisely the opposite. I enclose a copy for you to see.

It seems that some further clarifications would be in order, as my travel agent does not think it would be possible to arrange a trip to Tartu without a personal invitation. [8]

In his recollections of the visit to Estonia, Sebeok writes that:

I next wrote to Ariste, pleading for his intervention and assistance. He did not respond in writing, but, the day after we had disembarked and checked into our Intourist accommodations in Tallinn, a telegram was delivered to our room, clearing the way for the two of us to spend the following day, the 18th in Tartu ... barely at dawn, a car driven by a KGB man picked us up in the deserted lobby of our Tallinn hotel. Several hours later, it pulled up in front of the main building of Tartu State University. /.../ At this point, it is necessary to mention that, during our entire stay in Estonia *a fortiori* in Tartu, neither of us took any notes, let alone photographs. /.../ there were to my best recollection, over twenty men and women there, only a few of whom I had met before, swarming around us, introducing themselves. (Sebeok 1998: 25–26)

3. Endel Sõgel, 1922–1998. Soviet Estonian literary scholar; as the head of the Institute of Estonian Language and Literature (1968–1988), exercised ideological control over humanitarian sciences in Estonia.

First to be introduced was Petr Bogatyrev – as the “president” of the school, then Juri Lotman as the “secretary”, and Sara Minc (Sebeok 1998: 27):

As I had summarized previously, our searching discussions and debates of many semiotic topics were “freewheeling and never less than rousing”. They continued through lunch, and, most productively, “through the course of a leisurely, intimate amble outdoors, and finally during a farewell tea” (Sebeok 1988b: vii⁴). Indeed, confidential talks with our hosts took place typically in the course of leisurely strolls in the woods. They constituted the most productive, memorable, and cherished moments of our exhilarating (if exhausting) day.

Sebeok also describes how he was entrusted with smuggling a number of manuscripts (of scholarly nature) out of the country. Worried that the manuscripts might be confiscated on the border, he approached Ariste for advice. Ariste assured him that everything would be fine (Sebeok 1998: 28).

At the harbor, we noticed that all passengers ahead of us were ordered to pile their bags on a stand and open them. All were thoroughly searched. On being summoned by a Russian officer to step forward and submit likewise, I braced myself for serious trouble. At the very moment I placed our luggage on the counter, the entrance to the shed burst open and Ariste rushed in with a large bouquet of flowers, handing them to my astonished wife. At the top of his voice, he proclaimed what an honor it was for his country to have had two such distinguished and gracious American visitors in attendance of the Congress. While holding up the line behind us, the noisy hurly-burly fomented such befuddlement and delay that the impatient officer hurriedly waved us, with our untouched luggage, through to board the ship.

Whereas before 1970, the correspondence between Sebeok and Lotman was, as has already been mentioned, rather formal, the tone of the letters changes after the meeting in Tartu. The letters sent after this date are warmer in tone. Sebeok sends Lotman his “warm personal regards, also to mutual friends.” ([13], February 25 1971).

4. Sebeok, Thomas A. 1988b. Foreword to the Paperback Edition. In: Lucid, Daniel P. *Soviet Semiotics: An Anthology*. Baltimore: John Hopkins University Press: v–viii.

Exchange of texts

Perhaps the most valuable information contained in Sebeok's letters – at least to those interested in the history of 20th century Semiotics and the exchange of ideas between Eastern and Western semioticians – is the information we can find about the books and articles Lotman sent to Sebeok and vice versa.

From the letters, we find out that Lotman and Sebeok had discussed and made plans for translating and publishing works of the Tartu-Moscow school in English. It is possible that this was discussed during their meeting in Tartu. A list of works to be published in a collection edited by Sebeok is drawn up later that year; this is discussed in the correspondence between Lotman and Uspenski (Lotman, Uspenski 2008: 157). This list was to be sent to Sebeok by Lotman, along with reprints of the works to be published. Sebeok's letter from 15th February 1971 confirms the receipt of a list of works:

Your list of selections – which I understand would fill up three tomes, in English, respectively, of more or less 35, 30 and 35 signatures – seems fine to me, and I think that Mouton will also go ahead with the publication of these, provided that a mutually satisfactory agreement can be worked out between them and “Novosto,” and further assuming that the translation to be supplied – with or without revisions by you and your colleagues – is to be in acceptable English.

I would be extremely happy to establish a subseries of the APPROACHES TO SEMIOTICS series that I edit for Mouton, with the overall subtitle (in English, rather than in French) that you suggest; a good phrasing might be, “Semiotic studies in the U.S.S.R.,” Vol. 1, Vol. 2, etc. Such subseries could feature not only the books mentioned under #1, above, but also the books that you mention by Uspensky, and Ivanov-Toporov, and perhaps others in the future. [12]

Unfortunately, the project did not work out; no further reference is made to this collection in the letters. We also find no reference to whether any articles – apart from “Myth-name-culture”, written in collaboration by Lotman and Uspenski – were received by Sebeok. From Sebeok's 1998 recollections, we do find out that in 1986, when they met in Bergen, Lotman gave Sebeok a manuscript of his essay, “O semiosfere” (“On the Semiosphere”). Unfortunately, the translator, chosen by Lotman and approved by Sebeok, “neither delivered the English version nor returned the original typescript.” (Sebeok 1998: 30)

From Sebeok's letters, we find out that he received the following texts from Lotman:

July 2, 1968 – Semiotics III (probably *Trudy po znakovym sistemam* 3)

August 19, 1968 – Terminologia Indica I [5]

January 19 1971 – La structure du texte d'art [12]

November 2 1970 – Articles sur la typologie culturelle [12]

April 12 1971 – *Ancient India, Keele modelleerimise probleeme* 3.1 [14]

June 15 1972 – *Analiz Poeticheskogo Teksta* [15]

November 26 1974 – an offprint of “Myth-name-culture” by Lotman and Uspenski [25]

April 18 1978 – two autographed books by Lotman

August 27 1980 – *Semeiotike (Trudy po znakovym sistemam – T. P.)* 11 [28]

November 7 1983 – “your journal” (*Trudy . . . – T.P.*) [29]

It is difficult to tell which of Sebeok's works Lotman had received and read. The Lotman archive in Tallinn only has four books edited by Sebeok, but there is reason to believe that there were others which have gone missing. For instance, from Lotman's letters to Uspenski, dating from June 1968, we find out that Sebeok has sent Lotman a collection of papers on zoosemiotics (Lotman, Uspenski 2008: 100). The title of the book is not mentioned in the letters (Lotman calls it “Zoosebeotics”), nor could it be found in the Lotman archive at Tallinn University, but judging by the date, we can guess that it was Sebeok's book *Animal Communication: Techniques of Study and Results of Research* (Bloomington: Indiana University Press, 1968). Altogether, four books edited by Sebeok could be found in the archive in Tallinn: these are *The Semiotic Sphere 1986*, *The Encyclopedic Dictionary of Semiotics*, *Monastic Sign Languages*, and *Iconicity: essays on the nature of culture: festschrift for Thomas A. Sebeok on his 65th birthday*. The letters indicate that Lotman also received (Sebeok 27 May 1970, and 15 February 1971, respectively):

Language Sciences – all available back issues (no. 2, 4, 5 were out of print) and all future issues mailing list. [9]

The journal (*Semiotica*?) to the four colleagues that you mention and university's library of the Department of History and Philology. [12]

Conclusion

Perhaps it is Sebeok's last letter to Lotman that shows us best how involved he was in all matters related to semiotics. In this letter, dating from April 1 1991, Sebeok writes to Lotman that he has met their "mutual friend" V. V. Ivanov and discussed with him the contents of Lotman's letter which he had received that very same day he met Ivanov. It turns out that Lotman has written about lack of paper for printing *Semeiotike (Trudy po znakovym sistemam)*. A copy of this letter, dating from February 28 1991, was found in Eero Tarasti's personal archive, the reasons for which will become clear when we get to Sebeok's reply. In this letter, written in good (albeit not perfect) English, Lotman turns to Thomas Sebeok for help:

At present, the semiotic researches in Tartu & Moscow are on the new rise and, to my opinion, we have a right to speak about a new productive stage of development. But the scientific development is in apparent contradiction with a state of total economic collapse we are in. [. . .] I make bold to ask you personally and the International Association for Semiotic Studies to help us with paper.

Sebeok responds:

It was Ivanov's opinion – and, after considerable deliberation, I fully concur with his recommendation – that the ideal place from which to obtain rolls of the kind of paper that you need is Finland. Finland is obviously the prime European (if not worldwide) supplier of paper of this kind. In addition, its geographical adjacency to Estonia would enormously facilitate delivery.

Accordingly, I am sending a copy of your letter and this reply to my good friend professor Eero Tarasti, of the University of Helsinki. [34]

We can take this letter as an indicator of the extent of Sebeok's role as the organizer of world semiotics – that he had time and energy to deal with such matters, but also that Lotman could expect to receive advice or support from him in such matters.

Sebeok's letters to Lotman reveal his role in connecting and bridging the international semiotic community, traveling around and attempting to establish contacts between different people. He had great intellectual interest in people distant to him both geographically and culturally, which made them close to him despite the distances separating them – as can be

seen from Sebeok's and Lotman's meeting in Tartu. Although he cannot be single-handedly credited for this, it is still one of his greatest merits that he managed to establish contacts with Soviet semioticians and their works could be published in the West (including in *Semiotica*). It would seem that Sebeok's personality was largely what gave them this chance and created interest in them.

References

- Lotman, Juri, and Boris Uspenski
2008 Лотман, Юрий; Успенский, Борис. Переписка: 1964–1993.
 Москва : Новое литературное обозрение.
- Sebeok, Thomas
1998 “The Estonian connection”, *Sign Systems Studies* 26 (1998),
 pp. 20–41.

Part V. Final resting place



'beautiful blossom'

Measurement R2005100308B (Trimble GPS):

UTM coordinates (Universal Transverse Mercator), Datum NAD83, Zone 16N:

North: 4334000.505 m

East: 0542388.789 m

Altitude: 210.503 m

Geographic Projection (WGS 1984)

Latitude: 39° 09' 15.03126" North

Longitude: 86° 30' 33.88590" West

(differentially corrected; horizontal precision of 1.6 feet, 0.489 meters)

From: Sally Letsinger, Ph.D., LPG, GISP

Research Hydrogeologist and Director, Center for Geospatial Data Analysis

Department of Geological Sciences, Indiana University, Bloomington

Sent: Tuesday, October 03, 2006 1:21 PM

Subject: GPS location: Sebeok Burial Site

Part VI. Photographs



Photos 1 and 2. Sebeok house of birth and childhood upbringing in Budapest



Photo 3. Sebeok as infant with parents



Photo 4. Sebeok with colleagues in 1944



Photo 5. Winnebago field work in New Mexico



Photo 6. Sebeok with Juri Lotman early 1980s

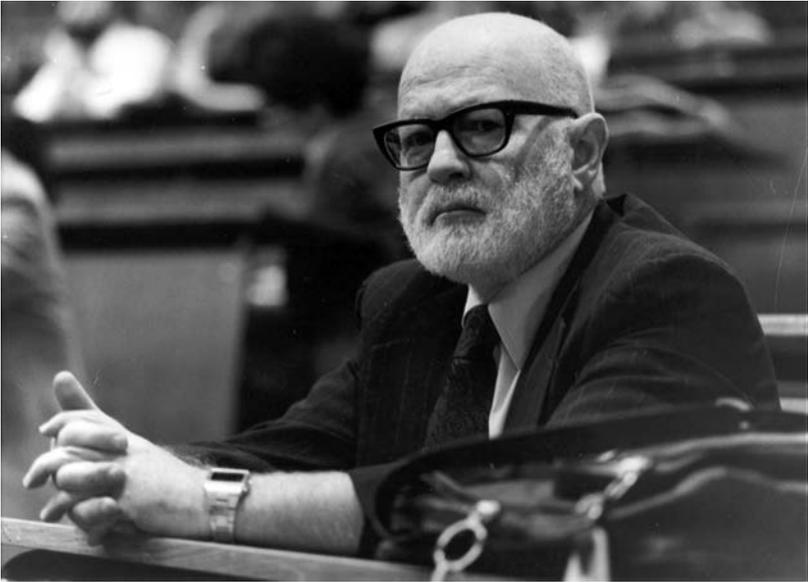


Photo 7. Sebeok at a Vienna conference, early 1980s.



Photo 8. Gathering at Imatra, 1980s



Photo 9. Sebeok with Solomon Marcus



Photo 10. Sebeok with John Gallman, Indiana University Press Director, 1991



Photo 11. Tisvildeleje meeting, 1991, Front row: Sebeok with Eva Ethelberg, Maibritt Andersen. Second row, from left: Thure von Uexküll, Niels Peter Agger, Claus Emmeche, Søren Ventegodt, Ib Ravn, Erik Krabbe, Nils A. Baas. Third row, from left: Mogens Claesson, Jörg Hermann, Frederik Stjernfelt, Jesper Hoffmeyer, Peder Voetmann Christiansen. Back row, from left: Ole Terney, Mogens Kilstrup, Søren Brier, and Svend Erik Larsen.



Photo 12. Sebeok with Gary Shank and John Deely at 65th birthday celebration in Budapest



Photo 13. Sebeok at home in Bloomington study



Photo 14. Sebeok chairing session of 1995 meeting in Porto, Portugal



Photo 15. IASS World Congress in Mexico, left to right: Gerard Deledalle, Roland Posner, Jancice Deledalle, Solomon Marcus, Gloria Withalm, Thomas Sebeok (center), Adrian Gimate-Welsh (front), unidentified (at Sebeok's left shoulder), Jeff Bernard, Norma Tasca, Lucia Santaella-Braga, John Deely, Silvia Harnau, unidentified.



Photo 16. Tom Sebeok with his wife Jean and Renata, wife of Umberto Eco, and others. Taken at Eco home near Urbino, 1992.



Photo 17. Sebeok with Maria Popova in Sofia, Bulgaria, 1997



Photo 18. Sebeok with some of the speakers at 80th birthday celebration: (left to right) W. C. Watt, Gyula Décsy, Sebeok, Lucia Santaella-Braga, Marcel Danesi, and Nathan Houser



Photo 19. Sebeok with wife Jean at 80th birthday celebration



Photo 20. At 80th birthday gathering, from left to right: Brooke Williams Deely, Sebeok, Lucia Santaella, and John Deely



Photo 21. Sebeok at his desk in his Bloomington home study

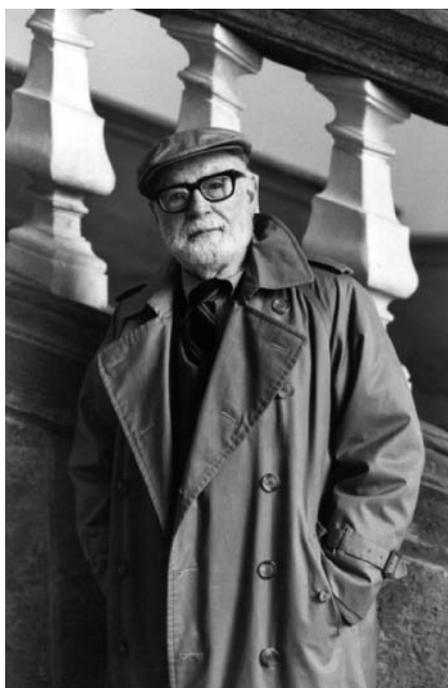


Photo 22. Sebeok in Italy c. 2000



Photo 23. Sebeok in Lugano with Augusto Ponzio, Susan Petrilli, and Luciano Ponzio



Photo 24. Garden of house at 1107 South Covenant Drive in Bloomington, Indiana, USA, where Sebeok's ashes were buried



Photo 25. Sebeok with Lisa Block de Behar and Augusto Ponzio, photo taken at Lugano, 2001



Photo 26. Sebeok with Lisa Block de Behar, Susan Petrilli, and his wife Jean, photo taken at Lugano, 2001

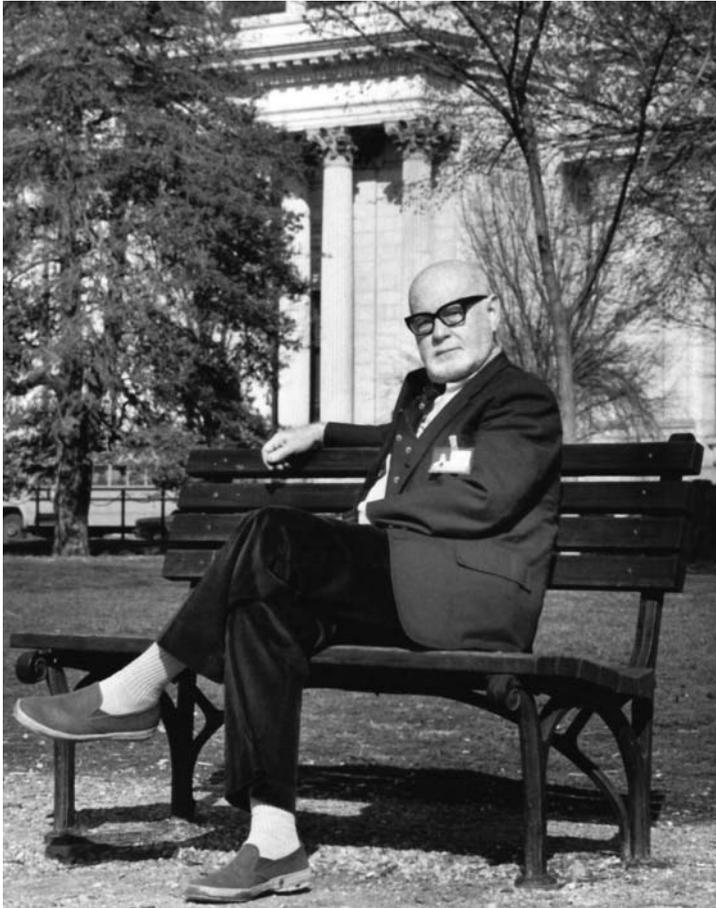


Photo 27. In 1983–1984, Tom Sebeok was a Smithsonian Institution Regents Fellow, with an office in the Smithsonian Museum of Natural History in Washington, DC. This picture of Tom sitting on a park bench in front of that museum was taken in the spring of 1984. The picture was used on the front cover of the Program for the 25th Annual Meeting of the Semiotic Society of America, held at Purdue University in West Lafayette, Indiana, 28–30 September 2000. The theme of that meeting was “Sebeok’s Century”, explained in the “Preface” to the *Semiotics 2000 Proceedings* volume, pp. xvii–xxxiv. The Proceedings volume of the following year, *Semiotics 2001*, contained on p. v, accompanied by Photo 22 above, a “Memorial Notice” to Tom as the “American *Paterfamilias Semioticarum* and Founder of Global Semiotics”.

Notes on contributors

Myrdene Anderson

Myrdene Anderson, anthropologist, linguist, and semiotician, received her Ph.D. in Anthropology from Yale University in 1978 and is now Associate Professor of Anthropology at Purdue University. She is a past president of the Central States Anthropological Society (1993–1994) and also of the Semiotic Society of America (1996–1997). Anderson's research on Saami (Lappish) ethnosemantics that commenced in 1971 continues today, joined by other projects involving both fieldwork and archival investigations. These other projects include the study of real and metaphoric trash: *Refiguring Debris—Becoming Unbecoming, Unbecoming Becoming*, a special issue of *The American Journal of Semiotics* 11.1–2 (1994) co-edited with Walter Randolph Adams; an ongoing ethnography of the artificial life movement, a nascent scientific community in *On Semiotic Modeling*, co-edited with floyd merrell (1991); reflections on violence and ecology (in *Cultural Shaping of Violence: Victimization, Escalation and Response* which she edited for Purdue University Press in 2004); and the provisionality of translation 'Ethnography as translation', *Athanos* 10.2: 181–187 (1999/2000).

Lisa Block de Behar

Lisa Block de Behar is Professor of Communication Analysis at the Universidad de la República, Montevideo, Uruguay. She was Head of the Department of Communication Science and Chair of Semiotics and Interpretation Theory in this same University. She has a PhD (1983) from the École des Hautes Études en Sciences Sociales, Paris. She is the author of *Análisis de un lenguaje en crisis* (Nuestra tierra, Montevideo, 1969); *El lenguaje de la publicidad* (Siglo XXI, México-Buenos Aires, 1973); *Una retórica del silencio. Sobre las funciones del lector y los procedimientos de la lectura literaria* (Siglo XXI, México, 1983). Premio Xavier Villaurrutia, México, 1984; *Al margen de Borges* (Siglo XXI, México-Buenos Aires, 1987); *Dos medios entre dos medios. Sobre la representación y sus dualidades* (Siglo XXI, México-Buenos Aires, 1990); *Una palabra propiamente dicha* (Siglo XXI, México-Buenos Aires, 1994), *A Rhetoric of Silence and*

Other Selected Writings (Mouton de Gruyter, Berlin, 1995); *Borges, ou les gestes d'un voyant aveugle* (Champion, Paris, 1998); *Borges, la pasión de una cita sin fin* (Siglo XXI, México, 1999); *Jules Laforgue, ou les métaphores du déplacement* (L'Harmattan, Paris, 2004); *Borges and the Passion of an Endless Quotation* (Sunny Press, New York, 2004); *Medios, pantallas y otros lugares comunes* (Katz, Buenos Aires, 2009); *En clave de be: Borges, Bioy, Blanqui y las leyendas del nombre* (Siglo XXI, México, in print). She edited a number of books including *France – Amérique latine: Croisements de lettres et de voies* (Paris, L'Harmattan, 2007); *Cine y totalitarismo*. Buenos Aires, UNGS/La Crujía, 2007; *Haroldo de Campos, Don de poesía. Ensayos críticos sobre su obra y una entrevista*. Lima, 2004; *Entre mitos & conocimiento/Between Myths & Knowledge*. Montevideo, AILC, 2003; *Obra selecta de Emir Rodríguez Monegal*. Caracas, Biblioteca Ayacucho, 2003. Prof. Block de Behar has written the Prologue of several editions of Louis Auguste Blanqui's work *L'Éternité par les astres* (Slatkine, Ginebra, 1996 y 2009), which she also translated into Spanish (Siglo XXI, México, 2000) and which is presently in print, in a German edition. The first edition in English with a Prologue by Dr. Block de Behar appeared in *CR: The New Centennial Review* 9:3, 2010. She obtained the "Prize Research Award" from the Foundation Alexander von Humboldt in 2002.

Søren Brier

Søren Brier is a professor in the Semiotics of Information, Cognition and Communication Sciences in the Department of International Culture and Communication Studies at Copenhagen Business School. He is the founder and editor of the interdisciplinary quarterly journal *Cybernetics & Human Knowing*, fellow of *The American Society for Cybernetics* and has been awarded *The Warren McCulloch Award*. He is member of the board of *International and Society for Biosemiotic Studies* and its journal *Biosemiotics* as well as of the scientific board of *The Science of Information Institute, Foundation of Information Science* and its journal, *TripleC*. He is a transdisciplinary integrating ethology, Peircean biosemiotics, second order cybernetics, Luhmanian systems theory, and embodied cognitive semantics into a frame for distributed cognition, communication and meaning he calls Cybersemiotics. He is the author of *Cybersemiotics: Why Information is not Enough* (Toronto University Press, 2008).

Paul Cobley

Paul Cobley, Reader in Communications at London Metropolitan University, is the author of a number of books, including *The American Thriller* (Palgrave, 2000) and *Narrative* (Routledge, 2001). He is the editor of *The Communication Theory Reader* (Routledge, 1996), *Communication Theories* 4 vols. (Routledge, 2006), *The Routledge Companion to Semiotics* (Routledge, 2009), and *Realism for the 21st Century: A John Deely Reader* (University of Scranton Press, 2009) among other books; he co-edits two journals, *Subject Matters* and *Social Semiotics*, and is associate editor of *Cybernetics and Human Knowing*. He is the series editor of *Routledge Introductions to Media and Communications*, co-series editor (with Peter J. Schulz) of the 22-volume *Handbook of Communication Sciences* (De Gruyter Mouton) and co-series editor (with Kalevi Kull) of *Semiotics, Communication and Cognition* (De Gruyter Mouton).

Donald Cunningham

Donald Cunningham retired from Indiana University and currently lives in St Petersburg Florida.

Marcel Danesi

Marcel Danesi, Professor of Linguistic Anthropology at the University of Toronto, is Editor-in-Chief of *Semiotica* and of the book series *Semiotics and Popular Culture* with Palgrave-Macmillan. He is the author of a number of books, including *Vico, Metaphor and the Origin of Language* (Indiana University Press, 1993), *The Forms of Meaning: Modeling Systems Theory and Semiotics* (with T. A. Sebeok, Mouton de Gruyter, 2000), *Brands* (Routledge, 2006), and *X-Rated: The Power of Mythic Symbolism in Popular Culture* (Palgrave-Macmillan, 2010).

John Deely

John Deely entered semiotics in 1968 through an editorial relations with Thomas Sebeok concerning the preparation of an English edition of John Poinsett's 1632 *Treatise on Signs*. In 1975 Deely attended the First North

American Semiotics Colloquium in the United States in Tampa, Florida, where Sebeok appointed him to the committee drafting the Constitution of the Semiotic Society of America (SSA). In 1981 Deely developed the SSA Style Sheet (“historical layering” of reference dates, based on the principle that no one writes posthumously) for its Journal and Annual Proceedings. From the SSA founding in 1976 until 2008 he participated in each Annual Meeting; with Joseph Brent he has edited *The American Journal of Semiotics* from the 2002 issue (vol. 18) to the present. Deely has been an officer of the International Association for Semiotic Studies (IASS) since its Fifth World Congress in 1994. He received in 1981 the 1st and in 2003 the 23rd “Mouton d’Or” award for best essay that year in the IASS journal, *Semiotica*. Besides articles, books, and professorships in the United States (including Indiana University, Bloomington, where in 1983 he team-taught semiotic historiography with Umberto Eco), Deely has been a plenary speaker at semiotic Congresses in China, and has taught semiotics at universities in Canada, Brazil, Mexico, Finland (first Visiting Professor of Semiotics, University of Helsinki), Bulgaria, and Estonia. His 1990 book, *Basics of Semiotics*, has so far appeared in six expanded editions and nine languages. In 1993 he was elected 2nd Thomas A. Sebeok Fellow of the Semiotic Society of America.

Umberto Eco

Umberto Eco is President of the *Scuola Superiore di Studi Umanistici*, University of Bologna, member of the Accademia dei Lincei (since November 2010) and an Honorary Fellow of Kellogg College, University of Oxford. His recent books include *A passo di gambero. Guerre calde e populismo mediatico* (Bompiani, 2006 – English translation: *Turning Back the Clock: Hot Wars and Media Populism*, 2007); *Storia della bruttezza* (Bompiani, 2007 – English translation: *On Ugliness*, 2007); *Dall’albero al labirinto: studi storici sul segno e l’interpretazione* (Bompiani, 2007); and *La vertigine della Lista* (Rizzoli, 2009 – English translation: *The Infinity of Lists*, 2010); earlier books include *Trattato di semiotica generale* (Bompiani, 1975; English translation: *A Theory of Semiotics*, 1976), *The Sign of Three* (ed., with Thomas Sebeok, Indiana University Press, 1983), *Semiotica e filosofia del linguaggio* (Einaudi, 1984; English translation: *Semiotics and the Philosophy of Language*, 1984), *Kant e l’ornitorinco* (R.C.S. Libri, 1997; English translation: *Kant and the Platypus: Essays on Language and Cognition*, 1999).

Dinda Gorlée

Dinda L. Gorlée is a semiotician and translation theoretician with research interests in interarts studies. Former Visiting Professor of the University of Helsinki, she directs a multilingual Legal Translation Agency in The Hague. She is research associate of *Wittgenstein Archives* at the University of Bergen and associate editor of *American Book Review* at University of Houston, Victoria, TX. Her books include: *Semiotics and the Problem of Translation: With Special Reference to the Semiotics of Charles S. Peirce* (Rodopi, 1994), *On Translating Signs: Exploring Text and Semio-Translation* (Rodopi, 2004), *Song and Significance: Virtues and Vices of Vocal Translation* (Rodopi, 2005). She guest-edited a special issue of *Semiotica*, called *Vital Signs of Semio-Translation* (2007). Her book, *Wittgenstein in Translation: Exploring Semiotic Signatures*, has been submitted to the *Semiotics, Communication and Cognition* series of De Gruyter Mouton.

Eric Hamp

Eric Pratt Hamp is Robert Maynard Hutchins Distinguished Service Professor Emeritus, Departments of Linguistics, Slavic Languages and Literatures, Psychology (Cognition and Communication). He is the co-editor of the 2-volume *Readings in Linguistics* (University of Chicago Press, 1972) and is Associate Editor of the journal *Anthropological Linguistics*.

Jesper Hoffmeyer

Jesper Hoffmeyer, Professor Emeritus (biosemiotics) at the Biological Institute, University of Copenhagen, did research in experimental biochemistry in the 1970s, then gradually turned towards questions of theoretical biology. From 1988 his work has focused on the developing field of biosemiotics. President of the *International Society for Biosemiotic Studies*, co-editor of the *Biosemiotics* book series at Springer and the journal *Biosemiotics*, member of the governing board for the *Nordic Association for Semiotic Studies* and the *International Committee of Jakob von Uexküll Centre*, Tartu University, Estonia. He was named fourth Sebeok Fellow of the Semiotic Society of America in 2000. Recent publications include *Biosemiotics. An Examination into the Signs of Life and the Life of Signs* (University of Scranton Press, 2008) and (as editor) *A Legacy of Living Systems: Gregory Bateson as Precursor to Biosemiotics* (Springer, 2008).

Jørgen Dines Johansen

Jørgen Dines Johansen is professor of general and comparative literature at the Center for Literature and Semiotics, University of Southern Denmark. He was research fellow at the *Research Center for Language and Semiotic Studies*, Indiana University, Bloomington, Indiana in 1982, Distinguished Visiting Scholar, University of Alberta in 1993, Fellow at the Institute for Advanced Studies, Indiana University, Bloomington in 1993, Fulbright Professor at UC Berkeley in 1994/95, and visiting fellow The Northrop Frye Centre, Victoria University in the University of Toronto, April–May 1997. He is the author of numerous books including *Dialogic Semiosis* (Indiana University Press, 1993), *Signs in Use* (with SvendErik Larsen, Routledge, 2002), *Literary Discourse. A Semiotic-pragmatic Approach to Literature* (University of Toronto Press, 2002 – this book was awarded The Barbara Perkins and George Perkins Prize by *The American Society for the Study of Narrative Literature*) and *Litteratur og intersubjektivitet* (University of Southern Denmark Press, 2007) as well as many articles in Danish, Nordic, and international journals. In 1999 he received the Mouton d'Or award.

Kalevi Kull

Kalevi Kull is Professor of Biosemiotics and Head of the Department of Semiotics at the University of Tartu, Estonia. His research is focused on the semiotic theory of living systems. The topic of his publications include biosemiotics, its theory and history, the legacy of Jakob von Uexküll, theoretical semiotics, models of evolution and communicative mechanisms of biodiversity. He is an editor of the journals *Sign Systems Studies* and *Biosemiotics*. In 2003 he was elected 5th Thomas A. Sebeok Fellow of the Semiotic Society of America.

floyd merrell

floyd merrell, Purdue University, teaches semiotic theory and Latin American cultures and literatures. His books include *Peirce, Signs, and Meaning* (University of Toronto Press, 1997), *Processing Cultural Meaning* (Legas, 2007) and *Entangling Forms* (De Gruyter Mouton, 2010).

Ivan Mladenov

Ivan Mladenov is a Professor (Ph.D. and D.Sc.) at the Bulgarian Academy of Sciences and at the New Bulgarian University in Sofia. His chief topic of interest is the philosophy of Charles S. Peirce, on which he wrote a book, *Conceptualizing Metaphors. On Charles Peirce's Marginalia* (Routledge, 2006), translated also in Japanese. His main publications embrace a vast spectrum of research, such as semiotics, theories of mind, literary theory and the philosophy of science.

Mariana Neț

Mariana Neț is a Professor at the “Iorgu Iordan – Al. Rosetti” Institute of Linguistics in Bucharest, Romania. Recently she was a Visiting Scholar at New York University. She has been guest Professor at the University of Perpignan (France), and guest lecturer at many other Universities in Europe and the US. She has published 100-odd articles in Romanian and international scholarly journals. Her fields of interest are cultural studies, semiotics, mentalities, lifestyles and social history. She is currently working on a book on Bucharest and New York City around 1900. Among her recent volumes are *Alexandre Dumas, écrivain du 21e siècle* (L'Harmattan, 2008); *Our Daily Shocks* (Ideea Europeană, 2007– in Romanian); *Philosophy of Language, Semiotics, Mentalities* (Institutul European, 2005); *Literature, Strategies, and Metalanguage. A Semiotic Approach* (Verlag des Instituts für Sozio-Semiotische Studien, 2002); *Literature, Atmosphere, and Society. A Semiotic Approach*. (Verlag des Instituts für Sozio-Semiotische Studien, 2000).

Tanel Pern

Tanel Pern is a doctoral student in semiotics at the University of Tartu, Estonia. His publications include ‘Socialist realism as anti-canonical art’.

Susan Petrilli

Susan Petrilli is Professor of Philosophy and Theory of Language at the University of Bari, Dipartimento di Lettere, Lingue e Arti (LELIA). In

2008 she was elected 7th *Thomas A. Sebeok Fellow of the Semiotic Society of America*. Her monographs include: *Significs, semiotica, significazione* (Adriatica, 1988), *Materia segnica e interpretazione. Figure e prospettive* (Milella, 1995), *Che cosa significa significare? Itinerari nello studio dei segni* (Milella, 1996), *Su Victoria Welby. Significs e filosofia del linguaggio* (Edizioni dal Sud, 1998), *Teoria dei segni e del linguaggio* (Edizioni Scientifiche Italiane, 1998), *Percorsi della semiotica* (Graphis, 2005), and most recently *Sign Crossroads in Global Perspective. Essays by Susan Petrilli, 7th SSA Sebeok Fellow. The American Journal of Semiotics, Volume 24.4* (2008), *Signifying and Understanding. Reading the Works of Victoria Welby and the Significs Movement* (de Gruyter Mouton 2009), *Sign Crossroads in Global Perspective. Semiotics and Responsibility* (Transaction, 2009), *Victoria Welby: Come interpretare, comprendere comunicare* (Carrocci, 2010).

Augusto Ponzio

Augusto Ponzio is Full Professor of Philosophy of Language and General Linguistics at the Dipartimento di Lettere, Lingue e Art (LELIA) at Bari University, Italy. His publications include *Man as Sign* (Mouton De Gruyter, 1990), *Introduzione a Michail Bachtin* (Bompiani, 1992 et 2003); *Signs, Dialogue, and Ideology* (John Benjamins, 1995), *Sujet et altérité. Sur Emmanuel Lévinas*. (L'Harmattan, 1995), *La revolución bajtiniana. El pensamiento de Bajtin y la ideología contemporánea* (Catedra, 1998), *Semiotics Unbounded*, with S. Petrilli (Toronto University Press, 2005), *The Dialogic Nature of Sign* (Ottawa, Legas, 2006), *The I questioned: Levinas and the critique of occidental reason, Subject Matters*, special edition, III, 1, 2006), *Fuori luogo. L'esorbitante nella riproduzione dell'identico* (Meltemi, 2007), *Fundamentos da Filosofia da linguagem* (Vozes, 2007), *Semiotics Today. From Global Semiotics to Semioethics* with S. Petrilli (Legas, 2007), *Scrittura, dialogo e alterità. Tra Bachtin e Lévinas* (Palomar, 2008), *E. Levinas, Globalisation, and Preventive Peace*, Ottawa (Legas, 2009), *Da dove verso dove. La parola altra nella comunicazione globale* (Guerra 2009), *L'écoute de l'autre* (L'Harmattan, 2009), *Rencontre de parole* (Baudry, 2010).

Maria Popova

Maria Popova, Professor in Semiotics at New Bulgarian University, is the author of a number of books and articles. In Bulgarian whose titles,

rendered in English, include *The Process of Speech Communication* (1986), *Semiotics and Communication* (2006, 2010), *Hierarchy in Semiotics* (1989), *The Political Symbolism of the Communist Party in Bulgaria* (1992), *The Meaning of Cultural Symbolism in the Psychological Paradigm* (1993). She is also the editor of 10 volumes of *Early Fall School in Semiotics* proceedings.

Tuuli Raudla

Tuuli Raudla is a doctoral student in semiotics at the University of Tartu, Estonia. Her publications include ‘Vico and Lotman: poetic meaning creation and primary modelling’.

Henry Remak

Henry H. H. Remak was Professor Emeritus of Comparative Literature, Germanic and West European Studies at Indiana University. He was the author of *German Criticism of Stendhal, 1818–1918* (University of Chicago Press, 1947) and *Structural Elements of the German Novella from Goethe to Thomas Mann* (Peter Lang, 1996). He died in 2009.

Eero Tarasti

Eero Tarasti is Professor of Musicology at the University of Helsinki and President of the IASS/AIS (International Association for Semiotic Studies), since 2004. He has been the Director of the International Semiotics Institute at Imatra, Finland (ISI) since its foundation in 1988 and Director of the international research project *Musical Signification* since 1986. His books include *Myth and Music. A Semiotic Approach to the Aesthetics of Myth in Music, especially that of Wagner, Sibelius and Stravinsky* (Mouton, 1979); *Hector Villa-Lobos* (McFarland, 1996); *A Theory of Musical Semiotics* (Indiana University Press, 1994); *Signs of Music* (de Gruyter, 2002); *Existential Semiotics* (Indiana University Press, 2001) as well as the novel (in French) *Le secret du professeur Amfortas* (L'Harmattan, 2000). He has also published over 400 articles, in many languages, about semiotics, musical semiotics, music theory, history, aesthetic and analysis.

Vilmos Voigt

Vilmos Voigt, Professor Emeritus of Folklore at Eötvös Loránd University Budapest (Hungary), founding president of Hungarian Association for Semiotic Studies, is the author of numerous books on folklore, Finno-Ugric studies, comparative religion and theory of literature. Among his books on semiotics see: *Bevezetés a szemiotikába | Introduction to Semiotics* (Budapest, Gondolat, 1977), in corrected Slovakian edition: *Úvod do semiotiky* (Bratislava, Tatran, 1981), corrected and updated edition: *Bevezetés a szemiotikába* (Budapest, Loisir, 2008). *A szemiotikai kultúra – a kultúra szemiotikája | Culture of Semiotics, Semiotics of Culture* (Debrecen, Kossuth Lajos Tudományegyetem, 1990), co-author with Mihály Hoppál: *Ethno-semiotics © Hungary* (Budapest, European Folklore Institute, 2003), *Euro-päische Linien. Studien zur Finnougristik, Folkloristik und Semiotik* (Budapest, Akadémiai Kiadó, 2005), as well as being editor or co-editor of the year-books of the Hungarian Association for Semiotics: *Magyar Szemiotikai Tanulmányok* (Budapest, from 1998, hitherto 23 issues). He is a Member of the editorial board of various international semiotic publications, Honorary Professor of București University and *doctor honoris causa* of Tartu University.

William Watt

W.C. Watt is the author of 100-odd articles in semiotics, linguistics, and kindred subjects, and the editor/author of *Writing Systems and Cognition: Perspectives from Psychology, Physiology, Linguistics, and Semiotics* (Dordrecht: Kluwer Academic, 1994).

Brooke Williams Deely

Brooke Williams Deely, Director of the Women, Culture and Society Program, University of St. Thomas, Houston is author of *Jacques Maritain: Antimodern or Ultramodern?* (Elsevier, 1976), an influential book on a philosopher who was a guiding figure for Sebeok in developing the doctrine of signs. She is also author of the monograph, *Semiotic and History* (Victoria College of University of Toronto, 1985); co-editor of *Frontiers in Semiotics* (Indiana University Press, 1986); and senior co-editor of the 1991 *Semiotica* Special Issue on History. She has published, as well, a series of essays on how the semiosis of Christian mysticism transforms discourse, within women's studies, in the redefining of *rational* animal as *semiotic* animal.

Index

- A River Runs Through It* 440–1
abduction 11, 12, 66, 102 ff, 217–8,
253, 256, 288, 368, 379–80
Ader, Robert 196–7
Adler, Mortimer 3, 90
aesthetics 12
Agger, Niels Peter 496
American Journal of Semiotics,
The 343
Andacht, Fernando 282
Andersen, Maibritt 496
Anderson, Myrdene 11, Chapter 2
passim, 195, 232 n. 22, Chapter 28
passim, 505
Andrade, Michael 24, 456, 457
anthropocentrism 299, 307, 331, 336
anthropology 24, 27, 85, 116, 138, 144,
145, Chapter 8 *passim*, 217, 360, 456
ff, 346
anthropomorphism 299
anthroposemiosis 334, 377, 380, 394
anthroposemiotics 7, 8, 26, 43, 46,
125, 309, 336
anti-ocularcentrism 92 ff
'ape language' 21, 23, 86, 142, 231,
332, 391
Apostolova, Ivanka 447
argument 259
Ariste 479, 480
Aristotle 47, 64–5, 123, 209, 290, 365
art 21, Chapter 10 *passim*
artificial intelligence (AI) 62–3, 75
Augustine, Saint 99, 140 n. 29, 147,
167, 365, 401
autopoiesis 11, 26, 48, 53, 55 ff, 108

Baas, Nils A. 496
bacteriosemiotics 234
Baer, Ernst von 224
Baer, Eugen 225, 234, 374
Bahnson, Claus Bahne 200
Bakhtin, Mikhail M. 125, 281, 335

Barnes, Harry Elmer 390
Barthes, Roland 86, 125
Bataille, Georges 95
Bateson, Gregory 8, 24, 26, 42, 44, 53,
55–6, 226 n. 7
Bateson, Mary Catherine 24
Beard, Charles A. 389 n. 3
Becker, Carl 385, 386, 387 ff, 404–5
Beckett, Samuel 88
behaviourism 85, 346
Bekoff, Mark 49
Bender, Harold 458–9
Bentham, Jeremy 11, 91 ff
Benveniste, Emile 86
Berg, Lev 224
Berkeley, George 167
Bernard, Jeff 361, 363, 437, 498
Berra, Yogi 457
Bertalanffy, Ludwig von 26
Big Bang 313
Binswanger, Ludwig 96
biologism 299
biology 12, 43, 48, 53, 65, 117, 118,
125, 130, 131, 202, 207 ff, 226 ff, 310,
383, 457
biosemiotics 7–8, 12, 21, 42, 43 ff, 86,
125, 145, 166, Chapter 9 *passim*,
Chapter 11 *passim*, 261, 307 ff, 309,
461 ff
biosphere 56, 236
Birdwhistell, Ray 24
Blake, William 251
Block de Behar, Lisa 11, Chapter 3
passim, 143 n. 38, 421–3, Chapter 21
passim, 503, 505–6
Blonsky, Marshall 283
Bloomfield, Leonard 2–3, 24, 85, 469,
125
Boas, Frans 213, 456
Bogart, Humphrey 251
Bogatyrev, Petr 480
Bogdanov, Bogdan 290, 350, 446, 449

- Bohr, Niels 102, 254, 271–2
 Boklund, Karin 446
 Bonfante, Giuliano 458, 469, 228
 Born, Max 262
 Bouissac, Paul 350, 374, 399, 400, 401–2
 Bouwsma, William 387, 404
 Božovič, Miran 93–4
 Brent, Joseph 287, 288
 Brier, Søren Chapter 4 *passim*, 496, 506
 Brînzeu, Pia 143 n. 38, 442
 Broglie, Louse de 256
 Broms, Henri 350
 Brown, Derren 106
 Burns, George 88
 Butler, Samuel 241
- Calefato, Patrizia 446
 Cambridge, University of 2, 19, 85, 137, 295
 Carnap, Rudolf 125, 452, 453
 Carroll, Lewis 258–9
Casablanca 364
 catastrophe theory 26, 177–8, 182
 cenoscopic knowledge 132, 141 + n. 31, 400–1
 Cervantes, Miguel de 174 n. 18
 Cézanne, Paul 251
 Chao, Yuen Ren 274
 Cheremis 170, 346, 452
 Chicago, University of 2–3, 5, 19, 85, 137, 345, 346, 357, 365, 440, 451 n. 1, Chapter 27 *passim*, 452, 455, 456, 458, 469
 Chomsky, Noam 164, 318
 Christiansen, Voetmann Peder 41, 42, 496
 circus 34–5
 Claesson, Mogens 496
 Clever Hans 11, 23, 85–6, 99–100, 105–6, 231 + n. 20, 315, 348–9, 391, 428, 429
 Copley, Paul 11, 75, Chapter 5 *passim*, 143 n. 38, 226, 446, 507, Chapter 22 *passim*
 code 48, 229
 code semiotics 298–9
 cognitive science 7, 42, 45, 49, 50, 53
 cognitive semantics 55, 66
 Cohen, Nicolas 196–7
 Cole, Fay-Cooper 24, 456, 457, 458
 Coleridge, Samuel Taylor 167 + n. 13, 168, 169
 Collingwood, R. G. 379, 386 n. 12, 392
 communication 5, 6, 27, 46, 50, 55, 57, 58, 59, 60 ff, 91, 98, 108, 193, 307, 314, 428, 364, 372; *see also* non-verbal communication *and* linguistics
 community of inquirers 91, 141
 conatus 66
 Conklin, Harold C. 24
 Connery, Sean 88
 Constantinescu, Ilinca 437, 443
 constructivism 46
 Copenhagen School of Biosemiotics 41
 Coteanu, Ivan 436
 Croce, Benedetto 386 n. 12
 cryptology 37
 Csikszentmihalyi, Mihaly 86, 361
 Cunningham, Don Chapter 23 *passim*, 507
 cybernetics 44, 47 48, 53–4, 55–6, 85, 209, 224, 229, 309–10
Cybernetics and Human Knowing 9, 47, 54, 75
 cybersemiotics 11, 44 ff
- Damasio, Antonio 197–8
 Danesi, Marcel 9, 11, 74, 75, 105, Chapter 5 *passim*, 143 n. 38, 499, 507, 470
 Dawkins, Richard 203
 de Certeau, Michel 97
 De Morgan, Augustus 366–7
 de Ridder, Peter 126 + n. 3,
 De Tienne, Andre 286
 deception 105, 106, 109
 Décsy, Gyula 499

- deduction 102, 253, 366, 368, 379–80, 430
- Deely, John 11, 24, 25, 26, 75, 89, 498, 120, 121–2, Chapter 7 *passim*, 199, 343, 360, 361, 363, 365, 374, 378, 379, 380, 385, 390 + n. 74, 395, 396, 397, 399, 401–2, 405 ff, Chapter 24 *passim*, 437, 446, 448, 451 n. 1, 462, 495, 500, 507–8
- Delbrück, Max 26
- Deledalle, Gerard 498
- Deledalle-Rhodes, Janice 498
- Dennett, Daniel 63
- Derrida, Jacques 94, 95, 96, 98, 110, 125
- Descartes, René 140 n. 29
- dialogue 97 ff, 108
- dicent 260, 261, 262, 274–5
- Dictionary of American English on Historical Principles* 456
- Dirty Harry* 88
- discourse 91 ff
- Dissanayake, Ellen 212 ff
- distinctive features 210
- Dodgson, Charles *see* Carroll, Lewis
- Don Giovanni* 438
- Doyle, Arthur Conan 34, 36, 100 ff, 179 n. 25, 251, 429–30
- Dracula 443
- dreams 216–7
- Driesch, Hans 40
- Dupin, C. Auguste 102
- Eagleton, Terry 94–5
- Eco, Renata 498
- Eco, Umberto 25, 31, 34, 86, 87, 88, 102, 123, 125, 136 n. 13, 143 n. 38, 223, 253, 282, 347, 349, 351, 360, 375, 379, 385, 395, 405, Chapter 29 *passim*, 470, 508
- ecology 26
- ecosemiotics 70, 235
- Eddington, Arthur 271
- Eggan, Fred 24, 457
- Einstein, Albert 252, 268
- eliminativism 192
- Emmeche, Claus 63, 139, 195, 229 n. 16, 238, 496
- endosemiosis 27, 67 ff, 98, 139, 201, 227, 233, 237, 309
- endosemiotics 234, 398
- endosymbiosis 26, 237
- Enlightenment 92 ff
- ens rationis* 136 ff, Chapter 18 *passim*
- ens reale* 136 ff, Chapter 18 *passim*
- entropy 46
- environmental semiotics 309
- epistemology 46, 64, 135, 143, 238
- Escher, Maurits C. 259
- Ethelberg, Eva 496
- ethics 13, 316
- ethology 11, 44–5, 48–9, 51, 52 ff, 118, 120, Chapter 10 *passim*, 230 ff, 239, 310
- Euclid 121
- evolutionary psychology 213 ff
- evolutionary theory 48, 61, 64–5, 146, 192 ff, 210 ff, 318–9, 429
- exaptation 318–9, 333–4, 348
- exosemiosis 27, 68
- exosemiotics 70
- Fano, Giorgio 294
- Fargo* 425
- Favareau, Don 201
- Feynman, Richard 258
- field/domain distinction 86
- Finno-Ugric Studies 13, 85, 228, Chapter 17 *passim*, 357, 451–2, 478
- Firstness 64, 65, 71, 72, 74, 253, 254, 255, 257, 259, 269, 275, 262
- Fisch, Max H. 125
- Fischer-Lichte, Erika 282
- flâneur* 37
- Foerster, Heinz von 8, 47, 45, 54, 55–6, 58 ff
- folklore *see* anthropology
- Foucault, Michel 11, 91 ff, 125
- fractals 264
- Frege, Gottlob 286

- Freud, Sigmund 49, 62, 178–9, 217, 350
 Frisch, Karl von 231
 Fry, Virginia 343

 Gaia 26, 236
 Galen 298, 309
 Galileo 140 n. 29
 Gallman, John 347, 495
 Gardner, Martin 346
 Garvin, Paul 471
 Gatherings in Biosemiotics 202–3, 224
 Geigges, Werner 200, 201
 Gelb, Jay 458
 genetics 48–9, 191 ff, 310
 geometry 264 ff
 Gerard, Ralph W. 228 + n. 10
 gesture 27, 67, 315, 332
 Gimate-Welsh, Adrian 498
 Glasersfeld, Ernst von 47
 glottocentrism 43, 98–9, 110, 124–5, 257, 259, 299, 307, 331–2, 336, 379
 golem 31 ff
 Gorlée, Dinda 11, Chapter 8 *passim*, 282, 509
 Gould, Stephen J. 26
 Grand Unified Theory 253
 Graves, Robert 295
 Gray, Hanna 455
 Greimas, Algirdas Julien 125
 ground 62–3
 Grund, Cynthia 443

 habit 66
 Hadamard, Jacques 24
 Hall, Robert 451
 Halle, Morris 455
 Hamp, Eric Chapter 30 *passim*, 509
 Hannen, Pauli 200
 Hansen, Helmuth 41
 Harnau, Sylvia 143 n. 38,
 Harris, Zellig 471
 Hartshorne, Charles 207–8 n. 1
 Hayles, Katherine N. 54
 Hediger, Heini 3, 12, 105–6, 226 n. 7, 230, 231 n. 20
 Hegel, Georg W. F. 72

 Heidegger, Martin 59
 Heisenberg, Werner 274
 Hemingway, Ernest 350
 Heracles 175
 Heraclitus 167
 hermeneutics 53
 Herrmann, Jörg 196, 200, 201, 224, 496
 Hippocrates 298, 309
 history Chapter 10 *passim*
 Hittinger, John 135 n. 9
 Hjelmslev, Louis 125, 401
 Hockett, Charles 90
 Hoffmeyer, Jesper 12, 41–2, 44, 55, 86, 89, 139, Chapter 9 *passim*, 229 n. 16, 235 n. 25, 238, 382 n. 11, 496, 509
 Hollister, C. Warren 377
 Holmes, Sherlock 34, 36, 39 n. 4, 11, 100 ff, 288, 380, 429–30
 Hopkins, Gerald Manley 208, 210
 Houser, Nathan 125, 499, 286
 humanism 90–1, 110, 213
 humour *see* jokes
 Humphrey, Hubert 344
 Humphrey, Nicholas K. 12, 209–10, 220–1
 Hungarian Academy of Sciences 360–1, 363
 Husserl, Edmund 46, 52, 60–1
 Hutchins, Robert M. 3, 453, 455
 Hutchinson, George E. 226 n. 7
 hypoicon 261, 254
 hypothesis *see* abduction

 icon, iconicity 13, 33, 119, 213, 252, 260, 261, 262, 274–5, 274–5, 315, 336, 337–8, 348, 366–70, 428
 idealism 11, 140, 171, 385, 386, 392
 ideoscopic knowledge 132, 141 n. 3
 Imatra 10, 74, 88, 123 n. 1, 147, 149, 224 n. 1, 238, 281, 284, 348, 350, 441, 442, 494
 immune system 107–9, 234
 immunosemiotics 234
 index, indexicality 13, 252, 260, 261, 262, 274–5, 269, 274–5, 315, 336, 337–8, 366–70, 428–9, 429
Indiana Jones and the Last Crusade 88

- Indiana University 22, 24, 25, 99, 137, 179, 281, 287, 293, 345, 346, 356, 402, 427 ff, 454, 469–70, 471, 487
 induction 253, 368, 379–80
 information theory 42, 45, 53–4, 55, 60, 75, 85
 Innenwelt 9 n. 10, 11, 117, 131, 133 ff, 142, 148, 209, 383, 394, 318
 International Association for Semiotic Studies (IASS) 9, 22, 26, 47–8, 54, 86, 90, 163, 293, 308, 343, 347, 350, 437, 445–6, 483
 International Semiotics Institute (ISI) 64, 350; *see also* Imatra
 International Society for Biosemiotic Studies 201
 International Summer Institute for Semiotics and Structural Studies (ISISSS) 11, 24–5, 26, 27, 461–2
 interpretant 13, 56, 165, 233, 240, 255, 259
 interpretation 13, 107–8
 interpretation semiotics 298–9
 intrasemiotics 69
 Iordan Iorgu 436
 Ivanov, V. V. 311, 482

 Jakobson, Roman 3, 4, 6, 8, 22, 24, 55, 86, 124, 125, 161, 168, 161, 163, 164, 165 n. 9, 166, 168, 179 + n. 25, 208, 223, 226 n. 7, 228, 232, 289, 295, 298, 346–7, 348, 355, 452, 453, 455, 459, 307, 308
 James, William 288, 289 n. 2
 Jay, Martin 11, 94, 96, 98–9, 100
 Jenkins, Iredell 208
 Johansen, Jørgen Dines 12, 143 n. 38, Chapter 10 *passim*, 284, 441, 509
 jokes 13, 27, 88, 89, 178 n. 24, 179, Chapter 16 *passim*, 425–6, 441–2, 463

 Kafka, Franz 457
 Kalmus, Hans 229 n. 17
 Kant, Immanuel 59, 62, 297, 319, 385

 Kantianism 64, 297
 Kauppi, Niilo 282
 Ketner, Kenneth L. 125
 Kilstrup, Mogens 496
 kinesics 25
 Klein, Robert 142
 Kloesel, Christian 286
 Kluckhohn, Clyde 455, 457
 Kotarbiński, Tadeusz 101
 Krabbe, Erik 496
 Krampen, Martin 7, 12, 25, 26, 43, 139, 143 n. 38, 196, 200, 238, 462
 Krippendorff, Klaus 47
 Kristeva, Julia 86, 446
 Kroeber, A. L. 455
 Krogman, Marion 457
 Kuhn, Thomas S. 400
 Kull, Kalevi 12, 63–4, 67, 86, 143 n. 38, 202, Chapter 11 *passim*, 446, 510
 !Kung people 258
 Kwyłowicz, Jerzy 455

 La Bruyère, Jean de 116
 Lacan, Jacques 94, 98, 125, 173
 Lagopoulos, Alexandros Ph. 143 n. 38, 446, 447
 Lakoff, George 50, 53, 59, 63, 66–7
 language 5, 8 n. 10, 11, 44, 52, 54, 57, 91, 98, 115, 124, 138, 142, 165, 191, 231, 237, 251, 252, 311–12, 317, 318–9, 332, 333 ff, 366, 372
 languaging 59, 70
 Larsen, Svend Erik 496, 42
 Lazicius, Gyula 359
 legisign 259, 260
 Levi della Vida, Giorgio 459
 Levin, David 11, 95–7, 110
 Levinas, Emanuel 97
 Lévi-Strauss, Claude 24, 125, 171, 177, 208, 298, 308, 346–7, 360
 Lewin, Kurt 44
 linguistics 3–5, 6, 45, 85, 124, 138, 140, 163, 228, 259, 310, 333, 336, 364, 400, 469

- 'linguistic turn', the 138
 literary theory Chapter 2 *passim*, 85, 360
 Locke, John 5 n. 7, 124, 139, 286, 297, 298, 309, 317, 319, 344, 349, 372, 374, 379, 393, 397, 402, 404
 logic 104–5, 259, 453
logica docens 104–6, 109, 110
logica utens 104–6, 109, 110
 logos 54
 Lorenz, Konrad 42, 43, 44, 48–9, 51, 53, 59, 63 ff, 11, 310
 Lotman, Juri M. 5 n. 7, 7 n. 8; 8 + n. 10, 9 n. 10, 124–5, 137, 139, 165, 177, 223 ff, 226 n. 7, 227, 233, 235, 238, 261, 311, 360, 381, 382, 394–5, 396, Chapter 33 *passim*, 493
 Lotz, John 359, 452
 Louis, Joe 89
 Lounsbury, Floyd 24
 Lovelock, James 26
 Lugano, University of 32, 445
 Luhmann, Niklas 44, 60–1, 67

 machine semiotics 309
 MacKinnon, Doris L. 2
 Maeterlinck, Maurice 349
 magic 11, 35, 86, 104, 106, 110, 148, 375
 Magritte, René 96
 Malinowski, Bronislaw 346
 Marcus, Solomon 143 n. 38, 498, 438, 495
 Margulis, Lynn 26
 Mari 346, 452
 Maritain, Jacques 22, 24, 346, 375, 395–6, 390, 399
 Martinelli, Dario 348
 materialism 47, 55, 64, 70, 191
 mathematics 54
 Mathews, Mitford M. 456
 Maturana, Humberto 26, 44, 47, 55 ff
 McKeon, Richard P. 3, 5, Chapter 27 *passim*
 Mead, Margaret 6, 24
 mechanicism 64–5, 193 n. 3
 medicine 104–5, 116, 200–2, 310, 387

 Merleau-Ponty, Maurice 69
 merrell, floyd 12, 195, Chapter 12 *passim*, 282, 510
 metaphor 50, 218, 335
 metaphysics 72
 Meyer, Leonard B. 346
 Meystel, Alexander 9
 microsemiotics 309
 Middendorf, Joan 428
 'Miles Gloriosus' 454
 Miller, Larry 343
 mind-dependent being *see ens rationis*
 mind-independent being *see ens reale*
 minor tradition – *see semiology and the pars pro toto fallacy*
 Mirka, Danuta 89
 Mladenov, Ivan 12, Chapter 13 *passim*, 511
 Möbius strip 265, 267, 275
 model, modelling 9 n. 10, 13, 50, 109, 117, 118, 124, 142, 195, 218–9, 220, 233, 235, 236, 239, 252 ff, 261, 274, 275, 307 ff, 332, 372, 392, 350, 478–9; *see also* Umwelt
 modernity 134 ff; *see also* Enlightenment
 Molière 116
 Molotov, Vyacheslav 87
 Monsieur Jourdain syndrome 116
 Moore, Edward C. 286
 morphology 49
 Morris, Charles 3, 24, 85, 91, 124, 125, 138, 223, 226 n. 7, 228, 238, 289, 293, 295, 296, 298, 307, 308, 334, 335, 346, 349, 365, 375, 396, 452, 453, 456, 374
 Morris, Desmond 208–9
 Moscow-Tartu School *see* Tartu-Moscow School *and* Lotman
 motivation 49–50, 52 ff, 59–60
 Mozart, Wolfgang A. 88
 musement 12, 256
 music 11
 mycosemiotics 309

 narrative 11, 251, 215 ff, 331, 397
 Necker cube 266

- Neţ, Mariana 143 n. 38, Chapter 25
passim, 511
 Nicholas of Cusa 263
 nominalism 140
 nonverbal communication 28, 43,
 44–5, 67, 91, 98 ff, 138 n. 20, 207 ff,
 227, 228, 228 ff, 256, 315, Chapter
 16 *passim*, 348, 425–6
 Nöth, Winfried 70, 75, 225, 282, 446

 object 66, 128 ff, 239, 255, 259, 275,
 429
 – dynamical 62
 – immediate 62
 Ockham, William of 140 n. 29
 Office of Strategic Services (OSS) 3–4
 Ogden, Charles K. 2, 7, 138, 223, 295,
 308, 346
 Oinas, Felix 228 n. 12
 Olson, Elder 452–3
 Origen 290
 Orosz, Magdolna 143 n. 38
 Ortega y Gasset, José 287
 Osgood, Charles E. 427
 Osten, Wilhelm von 429

 Panksepp, Jaak 217
 panopticism 11, 93 ff
 pansemiotics 146
 paralinguistics 25, 27, 67
 parallelism 208–10
 Parent, Roger 235 n. 24
pars pro toto fallacy 4 + n. 2, 5 n. 7,
 8 n. 10, 139 n. 26, 140, 143 n. 40,
 297, 298
 Pasternak, Charles 107
 Pavlov, Ivan P. 196–7
 Pearson, Charls 148 n. 52
 Peirce Edition Project 179, 286, 289,
 440
 Peirce, Charles S. 5, 7, 8, 12, 13, 26,
 34, 36, 39, 41, 44, 47, 48, 51, 55, 56,
 57, 59, 60, 61 ff, 90, 91, 94, 101, 115,
 124, 125, 135 ff + 140 n. 29, n. 30,
 141 n. 31, 142 n. 57, 146 n. 48, 161,
 164, 166, 167 n. 14, 168, 169, 171,
 172, 173, 174, 175 n. 9, 176 n. 23,
 180, 181, 193, 224, 226 n. 7, 233,
 238, 252, 253, 255 ff, 261, 263,
 264 n. 3, 267, 271, 274, 281, 282 ff,
 295 ff, 307, 309, 312, 317, 319, 337–
 8, 344, 346, 348, 349, 359, 364, 365,
 366, 370, 372, 374–8, 379, 380–
 1 + n. 9, 393, 397, 398, 401, 404,
 405, 440, 446, 472
 Peirce, Juliette 289
 Pelc, Jerzy 475
 Pencak, William 404
 Penrose triangle 265–6, 275
 Penrose, Roger 259, 265, 268
 Perlman, Vera 1
 Pern, Tanel Chapter 33 *passim*, 511
 Pesaresi, Massimo 293
 Petrilli, Susan 9, 12–13, 90, 97 ff, 108,
 135 n. 9, 136 + n. 18, 143 n. 38, 149,
 172, 350, 360, 425, 446, 448, 502,
 503, 511–2, Chapter 14 *passim*,
 Chapter 15 *passim*
 Pfungst, Oskar 99, 231
 Phaedrus 453
 phenomenology 49, 52, 53, 61, 287
 phenosemiosis 69
 philosophy 383, 392, 360, 400, 404,
 431
 physics Chapter 13 *passim*
 physiosemiosis 125, 146
 phytosemiotics 8, 26, 43, 46, 125, 139,
 145, 196, 234, 309
 Pier, John 437
 Pirsig, Robert 453
 Platonism 64, 71
 play 12, 217, 256
 play of musement 256, 259, 317, 319,
 334, 399
 Pleh, Csaba 358
 Pobrinskoy, George V. 458
 Poe, Edgar Allan 37
 – ‘Gold Bug, The’ 37
 Poinset, João 14, 26, 126 + n. 3, 137,
 139, 140, 140 n. 29, 141, 145, 319,
 365, 372, 374–6, 378, 379, 388, 393,
 395–6, 396, 397, 401, 404, 433
 Polanyi, Michael 260 + n. 2
 Ponzio L. 425

- Ponzo, Augusto 9, 13, 97 ff, 108,
136 + n. 18, 143 n. 38, 293, 294,
Chapter 15 *passim*, Chapter 16
passim, 350, 360, 425, 446, 448, 502,
503, 512
- Ponzo, Luciano 13, 339, 502
- Pope, Alexander 182–3
- Popova, Maria 143 n. 38, 437, 350,
Chapter 26 *passim*, 499, 513
- Popper, Karl 59
- positivism 26, 44, 191, 401–2
- Posner, Roland 438, 498
- postmodernity Chapter 5 *passim*,
Chapter 6 *passim*
- poststructuralism 96 ff
- power 91 ff
- pragmaticism 55, 57, 140–1
- pragmatics 55
- pragmatism 140, 288 + n. 2, 343, 446
- Premack, Ann James 231 n. 21
- Premack, David 231 n. 21
- pre-Socratics 64
- Prigogine, Ilya 26, 46, 59, 65
- Princeton 3, 4, 19, 85, 345, 365, 452,
458–9, 469
- Prodi, Giorgio 226 n. 7, 232, 233, 237,
238, 313 + n. 2
- Propp, Vladimir 125
- protosemiosis 313–4
- Proust, Marcel 251
- psycholinguistics 228, 357, 364, 427
- qualia 46, 65–6
- Rand, Ellen Emmet 288
- Ranke, Leopold von 383–4
- Ransdell, Joseph 25, 26, 125, 462
- Rauch, Irmengard 143 n. 38,
- Raudla, Tuuli Chapter 33 *passim*, 513
- Raun, Alo 228 n. 12
- Ravn, Ibn 496
- Read, Allen Walker 431
- realism 10, 46, 94, 371, 384, 386, 392,
404
- recovered memory syndrome 90
- Redfield, Robert 24, 455, 456–7
- Remak, Henry Chapter 31 *passim*, 513
- Rensch, Bernard 208
- rependum 56
- representamen 144–5, 165, 255, 259
- Research Centre for Language and
Semiotic Studies (RCLSS) 138, 179,
180, 281, 282 ff, 293, 345, 347, 427,
437, 439
- retroduction *see* abduction
- Reventlow, Ivan 11, 43–4, 56
- rheme 255, 259, 260
- Richards, Ivor A. 2, 7, 24, 223, 308,
346
- Rollins, Yvette 439
- Rosenthal, Robert 99, 142
- Rosetti, Alexandra 436
- Rossi-Landi, Ferruccio 293
- Rothschild, Frederick S. 226 n. 7,
232 n. 23
- Rousseau, Jean-Jacques 94
- Roussel, Raymond 96
- Rufus, William 377
- Rutherford, Ernest 105
- Ruthrof, Horst 143 n. 38
- Saami 27, 452
- Santaella-Braga, Lucia 143 n. 38, 498,
499, 282, 440, 500
- Sapir, Edward 171 n. 16, 456
- Sarailiev, Ivan 12, 288–9, 289 n. 2, 446
- Saussure, Ferdinand de 4, 5–6, 43,
61–2, 90, 115, 124, 125, 135 ff +
137 n. 15, 138 ff, 286, 297, 298,
307, 308
- Savage-Rumbaugh, Susan 231 n. 21
- Savan, David 125
- Schiller, Ferdinand C. S. 289 n. 2
- Schiller, Paul 208
- Schmeling, Max 89
- Schonecke, Wolfgang 200
- Schopenhauer, Arthur 122
- Schrödinger, Erwin 54–5, 271
- Schulz, Peter 445, 446
- Schwab, Joseph J. 228 + n. 10, 457

- science 11
- Seabra, José Agosto 443
- Sebeok, Deszö 2, 88
- Sebeok, Erica L. 33, 38, 363, 422, 440, 447
- Sebeok, Jessica A. 33, 38, 180, 351, 363, 422, 440
- Sebeok, Thomas A. as biologist
manqué 27, 85, 86, 283, 457
- Sebeok, Thomas A., publications mentioned in text
- *A Perfusion of Signs* 259, 433
 - *A Sign is Just a Sign* 107, 251, 283–4, 314, 429
 - *Advances in Semiotics* (series) 285, 287, 347
 - *American Signatures* 314
 - ‘Analysis of the vocalic system of a given language illustrated by Hungarian’ 345
 - *Animal Communication* 43, 314, 481
 - *Approaches to Semiotics* (edited volume) 6, 9, 43
 - *Approaches to Semiotics* (series) 126, 285, 343, 477, 481
 - ‘cognitive and the virtual self, the’ 107 ff
 - *Contributions to The Doctrine of Signs* 13, 116, 293, 314, 397, 405
 - *Current Trends in Linguistics* (series) 467
 - ‘Dialogue about signs with a Nobel laureate’ 349
 - ‘Ecumenicalism in semiotics’ 259
 - *Encyclopedic Dictionary of Semiotics* 163 n. 5, 481
 - *Essays in Zoosemiotics* 314
 - ‘Estonian connection, The’ 452, 475, 478
 - ‘evolution of semiosis, The’ 312, 313, 318
 - ‘Finnish adverbial noun forms’ 345
 - ‘Finno-Ugric and languages of India’ 345
 - ‘Finno-Ugric language family, The’ 345
 - *Forms of Meaning, The* 9, 117, 235
 - *Global Semiotics* 2 n. 2, 92, 107, 117, 294, 314, 343, 451 n. 1, 452
 - *How Animals Communicate* 314
 - *I Think I Am a Verb* 117, 198, 240, 294, 314, 407
 - ‘imperative in spoken Finnish, The’ 345
 - ‘Into the rose-garden’ 343
 - *Life Signs* 51–2
 - ‘Linguistics and the age and area hypothesis’ 459
 - *Monastic Sign Languages* 348, 481
 - ‘My short happy life in Finno-Ugric studies’ 13
 - *Myth: A Symposium* 9, 162 n. 4, 347
 - ‘One, two, three, UBERTY’ 255
 - ‘Pandora’s box: how and why to communicate 10,000 years into the future’ 283
 - *Perspectives in Zoosemiotics* 228, 229, 314, 293, 457
 - ‘Phonemics and orthography in Finnish’ 345
 - *Play of Musement, The* 117, 256, 283, 288, 293, 314
 - ‘Prefigurations of art’ 12, Chapter 10 *passim*, 235, 348
 - ‘Semiosis and semiotic: what lies in their future?’ 317
 - *Semiotic Web 1989, The* 437
 - *Semiotic Web 1991, The* 51
 - ‘semiotic self, The’ 107 ff
 - ‘semiotic self revisited, The’ 107 ff
 - *Semiotic Sphere, The* 481
 - *Semiotic Web, The* (series) 436
 - *Semiotics in the United States* 314, 396, 459, 447
 - *Sight, Sound and Sense* 314
 - *Sign and Its Masters, The* 117, Chapter 14 *passim*, 314, 459
 - *Sign of Three, The* 34, 102 ff, 253, 349
 - *Signs: An Introduction to Semiotics* 117, 224, 314
 - ‘Signs, bridges, origins’ 235
 - *Speaking of Apes* 51

- *Speech Surrogates: Drum and Whistle Systems* 348
- *Spoken Finnish* 345, 357, 452
- *Spoken Hungarian* 345, 357, 452
- *Structure and Texture* 459
- *Studies in Cheremis Folklore* 346
- *Style in Language* 9, 162 n. 4, 347, 357
- *Supernatural, The* 346
- ‘“Tell me, where is fancy bred?” The biosemiotic self’ 107 ff, 201
- Uralic and Altaic Series 88, 357
- ‘Vital signs’ 347
- ‘What do we know about signifying behavior in the domestic cat (*Felis catus*)?’
- ‘You know my method’ 288, 375
- ‘*You Know My Method: A Juxtaposition of Charles S. Peirce and Sherlock Holmes*’ 102 ff, 358–9, 438
- Secondness 39, 64, 74, 131, 180, 193–4, 253, 254, 255, 257, 259, 263, 275
- second-order cybernetics 11, 55–6, 57 ff
- self 106 ff, 135
- semantics 45, 63
- Semeiotike* 483; *see also Sign Systems Studies*
- semioethics 297
- semiology 4, 5–6, 8, 47, 124, 136 ff, 143 n. 40, 286, 297, 308–9, 331, 350, 393
- semiosphere 56, 223
- semiotic calculus 366
- semiotic emergence 192–3
- semiotic self 97, 107 ff, 233, 349
- Semiotic Society of America (SSA) 4, 7, 10, 11, 22, 23, 86, 147, 148, 150, 202, 344, 347, 350, 372, 374–5, 382 + n. 11, 431 ff, 477, 478, 504
- Semiotica* 26, 43, 75, 86, 135 n. 9, 166 n. 12, 232, 238, 285, 293, 308, 343, 365, 367, 401, 404, 439, 475 ff
- Serres, Michel 100
- Shank, Gary 495
- Shannon, Claude 8
- Sign of Four, The* 34
- Sign Systems Studies* 89
- significate *see* object
- Singer, Milton 24, 457
- sinsign 255, 260, 261, 262, 274–5
- Skinner, B. F. 43
- Smith, Howard 282
- Smithsonian Institution 504
- sociobiology 26, 51
- Sögel, Endel 479 n. 3
- Solimini, Maria 294
- South East European Centre for Semiotic Studies (SEECSS) 283–4
- Soviet semiotics *see* Tartu-Moscow School *and* Lotman
- Spinoza, Baruch 66
- Stanford University 2, 4, 6, 43, 454–5
- Steier, Fred 47
- Stengers, Isabelle 46, 59, 65
- Stepanov, Yuri S. 232
- Stjernfelt, Frederik 41, 42, 496
- Stonier, Thomas 54
- structural coupling 58 ff
- structuralism 47
- subjectivity *see* self *and* semiotic self
- Sugyama, Michelle S. 216
- surveillance 91 ff
- Swales, Peter 90
- Switzer, Yo Young 343
- Sylvia Harnau 498
- symbol, symbolicity 11, 13, 33, 60, 119, 161 ff, 213, 217, 252, 366–70, 274–5, 259, 260, 260, 261, 262, 274–5, 315, 336, 337–8
- symptom 429
- synesthons 368–9
- systems analysis (SA) 118 ff
- Szabolcsi, Miklós 360
- Szentágotha, Jan 361
- Szépi, György 358
- Tarasti, Eero 10, 13, 143 n. 38, 149, 282, 284, Chapter 17 *passim*, 360, 442, 446, 483, 513

- Tartu University 139, 202, 224–5, 284, 381, 479; *see also* Tartu-Moscow School
- Tartu-Moscow School 5 n. 2 + n. 7, 124, 139, 235, 261, 310, 333, 349–50, 381, 475 ff
- Tasca, Norma 143 n. 38, 443, 498
- Tax, Sol 457
- Tembrock, Günter 7
- Terney, Ole 496
- Thales 136 n. 13
- thermodynamics 46, 47, 53
- Thirdness 39, 64, 131, 193–4, 253, 254, 255, 257, 259, 275, 268
- Thom, René 26, 177–8, 180, 182, 400
- Thomas, Ronald R. 95
- Tillinghast, Pardon E. 377
- Tinbergen, Niko 11, 44, 48–9
- Todorov, Tzvetan 446
- Toews, John E. 403–4
- Toporov, V. N. 311
- transdisciplinarity 45, 51, 55, 57, 71, 75
- translation 11–12, Chapter 8 *passim*
- Truman, Harry S. 85
- Truzzi, Marcello 103
- Tschacher, Wolfgang 63
- Turing, Alan 53
- Turner, James M. W. 367, 368
- Tyler, Ralph W. 454–5
- Tyson, Mike 89
- Tzukalu, Kyriaki 447
- U.S. Department of Energy 109, 169
- Uberty 12
- Uexküll, Jakob von 2, 7, 9 n. 10, 12, 25, 26, 42, 51, 58, 63 ff, 71, 101, 102, 117, 124–5, 138, 166 n. 11, 168, 177, 198, 202, 203, 224, 226 n. 7, 227, 232, 233, 235, 237–8, 239, 293, 299, 310–11, 349, 380, 353, 385, 399
- Uexküll, Thure von 3, 12, 25, 42, 196, 199, 200, 201, 224, 232, 349, 462
- Umiker-Sebeok, Jean 10, 33, 38, 51, 89, 102 ff, 127, 238, 332, 347, 348, 360, 361, 380, 422, 438, 440, 441, 442, 451 n. 1, Chapter 28 *passim*, Chapter 29 *passim*, Chapter 30 *passim*, Chapter 31 *passim*, Chapter 32 *passim*, 476, 477, 498, 500, 503
- Umwelt 11, 26, 52, 58, 71, 90–1, 102, 108, 109, 117, 128 ff, 198 ff, 199, 230, 231, 234, 235, 236, 349, 383, 428, 429
- Umwelt-Forschung 102
- Umweltlehre 224
- Uspenski, Boris 475, 476, 481, 482
- Vailati, Giovanni 289 n. 2
- Varela, Francisco 26, 44, 47, 55 ff
- Ventegodt, Søren 496
- Verne, Jules 37, 100 ff
- Vingt milles lieues sous les mers* 101
- vision 11, 91 ff
- vitalism 49
- Voigt, Vilmos 13, 143 n. 38, 350, Chapter 18 *passim*, 514
- Vrba, Elizabeth S. 26
- Vygotsky, Lev S. 209
- Wagner, Richard 349
- Wartburg, Walther von 469
- Watson, Dr. John 101, 104, 430
- Watt, W. C. 13, 446, Chapter 19 *passim*, 398–9, 405, Chapter 32 *passim*, 514, 499
- Weaver, Warren 8
- Wedgwood, C. V. 379
- Welby, Victoria 226 n. 7
- Wells, Herman B. 89, 345, 470
- Wells, Rulon 24
- Weyl, Herrmann 268
- Wheeler, Harvey 195
- Wheeler, John Archibald 12, 254 n. 1, 263, 269, 270, 272, 273 + n. 5, 276, 406
- White, Hayden 378
- Whorf, Benjamin L. 171 n. 16
- Wiener, Norbert 8, 53–5, 88
- Wilkins, John 37
- Williams Deely, Brooke 13–14, 141, Brooke Chapter 20 *passim*, 500, 514
- Willis, John C. 228
- Wilson, Dooley 251
- Wimmer, Manfred 53

- Winner, Thomas 7 n. 8
Withalm, Gloria 361, 363, 498
Wittgenstein, Ludwig 62–3, 66 + n. 6,
180, 181 n. 26
Woodger, Joseph H. 232
Woolf, Virginia 356
Yamaguchi, Masao 143 n. 38
Zaliznjak, A. A. 311
*Zen and the Art of Motorcycle
Maintenance* 453
Zola, Emile 101
zoosemiotics 4–5, 7, 8, 12, 21, 23, 24,
26, 46, 85, 86, 125, 139, 145, 194–5,
Chapter 10 *passim*, 225, 227, 228 ff,
283, 309, 348, 349, 433
Zweyberg, Lennert 346