WHAT HAPPENED TO PHILOSOPHY
BETWEEN AQUINAS AND DESCARTES?

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INTRODUCTION

a. Pondering the Imponderable

HE NEO-THOMISTIC revival launched by Leo XIII eems to have run its main course with an almost exclusive ook at the works of Thomas himself without taking much into serious consideration the work of his Latin commentators. At this moment, we find that a book translated from the work of the last of the Latin commentators, the *Tractatus de Signis* of John Poinsot, while receiving no significant treatment within the Catholic intellectual world,1 is seriously discussed within the international intellectual movement that has grown up in the last quarter century around the study of signs and reviewed in such mass media as the *Times* of New York, Los Angeles, and London. 2

Such a situation participates in improbability. My own view is that *The Semiotic of John Poinsot* (as the work in question is subtitled in its contemporary edition) is a harbinger of what

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1 For details, see footnote 2 of the article by James Bernard Murphy, "Language, Communication, and Representation in the Semiotic of John Poinsot," in this issue.

2 Thomas A. Sebeok, " 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, also in German translation by Jeff Bernard in *Semiotische Berichte* Jg. 11 2/1987: 234-239, with translator's "Anmerkung" p. 240; Richard J. Morris, *The Book Review of The Los Angeles Times,* Sunday, 11 May 1986, p. 8; and Desmond Paul Henry, "The Way to Awareness," *The Times Literary Supplement* no. 4,413 (October 30-November 5, 1987), p. 1201.

the postmodern development may prove to be. Postmodernism, in my view, is not to be, as initially appears, a kind of literary/ sophistic attempt to eviscerate rational discourse in philosophy through a forced control of signifiers made rather to dismantle (under the mantra of " deconstruction ") than to constitute some text taken precisely as severed from any vestige of authorial intention. Postmodernism in the long run will be seen rather as the term inevitably employed through juxtaposition with the internal dimensions of the classical modern paradigm so as to establish thereby a philosophical sense of a change of age and temper of thought defined historically but able to link contemporary requirements of speculative understanding with late Latin themes omitted from the repertoire of analytic tools developed by modernity. 3

b. Naming the names

Several names here bear explaining, not the least of which is "semiotic." Suffice it to say that this is the name coined by John Locke in 1690 to designate the field of investigation that would result from thematic inquiry into the role of signs in human affairs wherever there is a question of experience or knowledge. This study, or "doctrine of signs," as Locke also called it, turns out to be extensive, since it embraces the whole of human knowledge from its origins in sense to its most refined intellectual forays in whatever field, and the realms of social interaction and cultural development as well.4 Sacramental theology has its foundations in the sign, and experimental study depends on the interpretation of signs throughout its ambit. Whether we look to communication as between God and human beings, between human beings among themselves, between human beings with

3 This is the argument of my work, *New Beginnings: Early Modern Philosophy and Postmodern Thought* (Toronto, Canada: University of Toronto Press, 1994).

4 " Sommaire: c'est dans la tradition de Peirce, Locke, et Jean de Saint-Thomas que la logique peut devenir une semiotique qui absorberait l'epistemologie et meme la philosophie de la nature" (Eleuthere Winance, *Revue Thomiste,* LXXX[juillet-aout 1983], 514-516.

other species, or between human beings and the physical world, we find ourselves caught up in a web of sign relations. It is hardly without interest to discover that the first thinker who was able to systematize the unity of the object of inquiry the action of signs provides was a thinker from the end of the Latin Age who also was a principal commentator on and developer of the thought of Thomas Aquinas.

For centuries the Morning Star and the Evening Star were not known to be but a single planetary entity seen in two different contexts. So for those few over the last three and a half centuries who have known of or studied at all the thought of the Latin author called Joannes a Sancto Thoma, he has always appeared to be an Evening Star of Latin Scholasticism and even of the Latin Age itself which began with Augustine (the first thinker to go on record with the view that the notion of sign has the capacity to unite in a single object of inquiry the otherwise disparate domains of nature and culture). It comes as something of a shock and sometimes-to judge by the resistance of some to the discovery-a rude awakening to discover that this Evening Star of scholasticism is at the same time a Morning Star of the postmodern age. Such is the identity of Joannes a Sancto Thoma with John Poinsot. He was author in 1632 of the first systematic treatise to *establish the foundations* of semiotic inquiry as a unified subject matter, proclaiming on his deathbed in June of 1644 that he had taught and written nothing over the last thirty years of his life that did not seem to him consonant with truth and conformed to the thought of Aquinas. [5]

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[5] The Solesmes editors of Poinsot's *Cursus Theologicus* give this description of Poinsot's deathbed in their Introduction to the first volume (1931: xii, U 39) : " Generali praemunitus confessione, religionis habitus indutus, sacram Eucharistiam humi genuflexus adorare voluit atque in conspectu Dei sui magna voce protestatus 'numquam triginta annorum spatio aut scripsisse aut docuisse quod veritati consonum, atque Angelico Doctori conforme non judicaret . . . numquam regi quidquam consuluisse quod non in majus Dei obsequium, reipublicae commodum et Principio beneficium credidisset,' laetus in pace Domini exspiravit, die 17 junii 1644, quinquagesimo quinto aetatis anno nondum plene exacto."

A third name that bears explaining beside that of semiotic and the name of Poinsot himself is "postmodemism."   Like Prot- estantism, postmodernity is a term and idea which has its mean- ing from an opposition.   In this case the opposition is to the classical modern development of philosophy as it occurred be- tween Descartes and Kant and dominated philosophy even into the early and middle years of the twentieth century. This devel- opment isolated reason not only from its contact with the physical being of nature but also from the subjective resources of reason in the affective life and social being of the knower. Both ruptures are rejected by thinkers called accordingly "postmodern."   The work in semiotic of John Poinsot best establishes the framework in which it becomes possible to heal such ruptures and to attain a philosophical synthesis beyond the modern opposition of ideal- ism to realism.

Let this overview suffice to introduce this first of the melange of three essays offered in this issue of *The Thomist* in honor of an author dead now exactly three-hundred and fifty years. Each of the essays looks to a different aspect of the thought of Poinsot, and together they will barely scratch the surface of the treasures his writings offer to the postmodern age. I devote the principal thrust of my essay to establishing Poinsot's value as a point of recuperation of the lost centuries closing the Latin Age in their bearing on the contemporary situation in philosophy.

1. Posing the Problem

The standard answer to the question of what happened in philosophy between Aquinas and Descartes is " Not much, apart from Occam." Even the recent recrudescense of interest in the specifically early phase of the modern period has so far done little to change this standard answer, because the principal scholars investigating the period look almost exclusively to the classical modern sources and the nascent classical mainstream de- velopment those sources gave rise to as eventually culminating in the work of Immanuel Kant.

This train of investigation is unfortunate, because the standard story of early modern philosophy is as much a record of prejudices and narrow preoccupations (especially methodological ones) as it is a record of a properly philosophical development. Until the classical modern sources are viewed in a new light, it is not likely they will contribute much to the telling of a different story.

A different story about the early modern development is not only possible but demanded as soon as we take the trouble to view the situation of early modern philosophy less in terms of its classical mainstream development than in terms of the actual relations obtaining in the age of Descartes between the choices which led to the mainstream modern development and the wider possibilities for choice which the speculative Latin context of that period provided. But these possibilities were destined to fall between the cracks of history until Charles Peirce, inspired by Locke's anomalous conclusion to his *Essay concerning Humane Understanding* (otherwise launching modern empiricism) gave them life again in our time as an inevitable trajectory along which postmodern thought must rise and eventually achieve definition of itself in positive terms.

The history of early modern philosophy can be recounted in ways much more interesting and relevant to postmodern developments than the standard studies narrowly focussed on Descartes and Leibniz, or Locke and Hume, would have us believe. But we have to be willing to abandon the established academic pattern of approaching the early modern period only in order to study over again, in ever greater detail, the classical modern sources as giving rise to the mainstream modern development with its culmination in the Kantian synthesis. For to see a live alternative to this standard approach, it is necessary to look in the other direction, so to speak, and to investigate not the classical modern sources in relation to one another, but the horizon itself of Latinity against which the classical modern authors set themselves. Once we consider the ideas of Descartes and Locke in relation to the then-current Latin speculations as developments of the fifteenth and sixteenth centuries, the Latin horizon proves

to be a context wider and more subtle than either the father of
rationalism or the father of empiricism actually drew upon in fix-
ing the direction for the future of philosophy in its classical
modern guise.

   Not only does the late Latin milieu provide a wider context of
speculative possibility than either Descartes, Locke, or their
classical modern successors realized, but, as we can now see re-
garding it from the advantage of a nascent postmodernism, the
Latin milieu provides a richer context as well, one which argu-
ably adumbrates the full requirements of a philosophy which has
experience integrally understood for its center of gravity. [6]

   The opportunity a backward glance from the early modern
period affords us today, it needs to be said, is by no means one
easily exploited.   Approached from its Latin side rather than
from the side of its emergence out of Latin into the national
language traditions of classical modern thought, early modern
philosophy becomes a dismaying maze of the greatest difficulty
to navigate.   Without some sort of compass and guide providing
an initial orientation, the whole landscape dissolves into a morass
of material repetitions of terms and multiplication of abstruse
distinctions leaving the visitor practically without a clue beyond
the engrained modern prejudices toward the later Latins which
every contemporary has imbibed with the air we breath.   Need-
less to say, the orientation more or less unconsciously provided
by such prejudices is not particularly helpful if it is to be a ques-
tion of attaining a new understanding of the possibilities inherent
in the late Latin matrix of early modern philosophy (whether
retrospectively or prospectively considered), and eventually see-
ing those possibilities with rinsed eyes in their bearing on the
future of thought and, hence, postmodernism.

   A familiar guide, one who orients us in terms of the classical
modern development as it actually came about, is perforce the

   [6] See my essay on " Philosophy and Experience," *American Catholic Philo-*
sophical Quarterly LXVI.3 (Summer, 1992), 299-319. For a more systematic
and purely theoretical or speculative discussion, see *The Human Use of Signs*
(Lanham, MD: Rowman & Littlefield, 1994).

least useful one. What is called for rather is a guide or, indeed, any number of guides, unfamiliar in terms of the actual modern development after Descartes, but intimately familiar with the Latin development up to the time of Descartes which provided the surrounding context of Descartes's work. That there could be some such " neglected figure " or " figures " capable of orienting us in terms of the intrinsic possibilities of the Latin development and proving that those possibilities are not what Descartes and the mainstream moderns have heretofore led us to believe they were is clearly a research hypothesis of some heuristic value, and insofar worth investigating. For even though, as far as the history of early modern philosophy goes, it is impossible to study it while leaving out the standard figures, it is equally impossible to enlarge the early modern context through the Latin sources if we regard those sources solely from the standpoint to which the standard figures have accustomed us. We need non-standard figures as guides, ones who knew the whole early modern Latin context, and therefore who knew the Latin development better than Descartes himself. In particular, with a view to the postmodern development, we need a guide who is able to show within the late Latin context an orientation toward a notion within experience of being understood as prior to the categories and to any division of being into what is mind-independent and mind-dependent.

Recent investigations have revealed several such figures,[7] but my own research has come to rely particularly on the early 17th century synthesis of late Latin thought made by Joao Poinsot (1589-1644), a man born seven years earlier than Descartes and deceased six years earlier. A man in his own right squarely of the early modern period, familiar with its *Zeitgeist* and subject to its demands, Poinsot was yet oriented to the Latin past rather

[7] See in particular the studies of the Dominican philosopher Mauricio Beuchot, *Significado y Disrnrso.   La filosofia del lenguaje en algunos escolasticos espaiioles post-medievales* (Mexico City: Universidad Nacional Aut6-noma de Mexico, 1988) ; and *Aspectos hist6ricos de la semi6tica y la filosofia de! lenguaje* (Mexico City: Universidad Nacion<il Aut6notna de Mfaico, 1987).

than to the national language future of philosophical develop-
ment. A contemporary of Descartes neglected in the standard
histories of the modern period, to say the least, Poinsot was none-
theless a central figure of the large Latin matrix within which
early modern philosophy gestated. He was also, as we noted in
the Introduction, writing under his Latin religious name
"Joannes a Sancto Thoma," a principal commentator on the
work of Thomas Aquinas, a role which one would expect to
have recommended him to the 19th and 20th century decades of
Thomistic revival, though this did not in fact prove to be the
case, for reasons some of which I want to propose for considera-
tion here.

Hence my concern in this essay is with the question of why
the late Latin development as a whole (for which the writings
of Poinsot may be regarded as a synecdoche, as we shall see), the
work, that is, of the Latin centuries following Aquinas and
Occam (who died seventy-five years apart), has been so consist-
ently neglected and, indeed, summarily dismissed as a wasteland
despite the fact that, almost without exception, contemporary
professors passing along this received opinion can lay no claim
to familiarity with writings of the period consigned to oblivion.
In other words, my concern in this essay is with the exposure of
a web-a semiotic web-of historical prejudices continuing at
work today and presenting a deadly obstacle to a just assessment
of the contemporary situation in philosophy as regards its specu-
lative links with the philosophical past.

2. Outlining Latinity with Rinsed Eyes

It needs to be said that the absence of a proper outline for the
Latin Age in philosophy as a whole is a major obstacle to ap-
preciating the work of the late Latin figures in general, including
such a figure as Poinsot whose work exists in particular pre-
cisely as a final detail on the capstone of such an outline. The
standard treatment of the Latin Age to begin with, is mislead-
ingly labelled " medieval philosophy," and extends, in the stand-
ard coverage (in a hodge-podge selection of writings), from
Augustine (354-430) to William of Occam (c.1285-1347).

Despite Tachau's work establishing Scotus's distinction between so-called intuitive and abstractive awareness (*notitia intuitiva/ notitia abstractiva)* as the initial frame for the shift of emphasis from being to discourse in the closing Latin centuries, [8] Latin authors after Occam are given only the most superficial treatment or are ignored entirely in the standard coverage. Philosophy is supposed to "begin anew" with Descartes or, shortly before, with Francis Bacon (1561-1626), who shared Descartes's passion for a new beginning and a jettisoning of Latin tradition. Time may be a good partner in advancing the development of a sub-ject-matter that has once been well-outlined, as Aristotle claimed (c.335-334BC: *Ethics* 1098a20-25) ; but the situation of teach-ing medieval philosophy in modern times bears witness rather to Aristotle's inverse point (ibid.) that, in the absence of such an outline, progress in the area tends towards a standstill.

Yet for all its conspicuous absence in today's academy, a proper outline of the Latin age is not difficult to draw. In fact, the development of philosophy in Latin after the fall of the Roman empire is an indigenous, multi-faceted, and highly organic devel-opment which falls naturally into two main periods or phases. The *first period* extends from Augustine in the fifth century to Peter Abelard (1079-1142) and John of Salisbury (1115-1180) in the twelfth. In this interval, the logical treatises of Aristotle and such related Greek writings as Porphyry's *Quinque Verba* (the *lsagoge)* were the only works of Greek philosophy surviv-

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8 " Despite the difficulties presented by his innovation in grafting intuition onto the process induced by species, the dichotomy of intuitive and abstractive cognition was rapidly and widely adopted by Parisian trained theologians. Within a decade of the Subtle Doctor's death, its acceptance on the other side of the English Channel was also ensured. That is not to say that his under-standing was uniformly employed; nor, indeed, that all who employed the terminology of intuitive and abstractive cognition considered Scotus's an ade-quate delineation of the modes of cognition; nevertheless, the history of medi-eval theories of knowledge from ca. 1310 can be traced as the development of this dichotomy." Katherine H. Tachau, *Vision and Certitude in the Age of Ockham: Optics, Epistemology, and the Foundations of Semantics 1250-1345* (Leiden: E. J. Brill, 1988), pp. 80-81.

ing in translation from the Greek, whence philosophy in its own
right (that is, as relatively unmixed with theology) developed
around mainly logical and methodological questions. The *second
period* extends from Albertus Magnus (1193-1280) and Roger
Bacon (c.1224-1292) to Francis Suarez (1548-1617) and John
Poinsot (1589-1644), when the full range of Aristotle's writings,
along with such influential Arabic commentaries as those of
Avicenna and Averroes, provided the newly emerging universities
with the substance of their curriculum across the full range of
philosophical subject matter-including   those areas we now see
as specifically scientific, hence the great emphasis placed in this
second phase, along with the growing interest in epistemological
inquiries, on philosophy of nature, an emphasis which developed
into a special focus on the place in nature of the human species.[9]

   In the Italian peninsula, this focus led to advances in medicine
and to a preparation of the ground for the framing of nature's
details in mathematically calculable terms which climaxed in the
work of Galileo and the establishment of sciences in the modern
sense, as the many works of William Wallace in recent years
have shown in particular.   In the Iberian peninsula, the focus
led rather to a concentration on social, political, and religious
questions more in direct continuity with the theological emphases
of the central European   " high middle ages," though in logic and
psychology breakthrough   developments took place especially in
the areas we now recognize generically as epistemological and
specifically as semiotic.[10]

   Thus just as the first period of the Latin Age was concentrated
especially on methodological tools (the " liberal arts ") and con-
cepts of logic, so the second period was concentrated initially on

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   [9] Of this development the " philosophy of human nature " courses in curricula
today are one of the principal vestiges.
   [10] An excellent brief summary   of the general historical context, based on
the many words of Vicente Mufioz Delgado (esp. *L6gica formal y filosofia en
Domingo de Soto* [Madrid, 1964]) and Earline J. Ashworth (esp. "Multiple
Quantification and the Use of Special Quantifiers in Early Sixteenth Century
Logic," *Notre Dame Journal of Formal Logic* XIX [1978], 599-613), is pro-
vided by Ignacio Angelelli in " Logic in the Iberian Age of Discovery : Scho-

the substantive matters of natural philosophy so broadly treated as to provide also the foundations for ethics and metaphysics-matters treated thematically according to the customs and *Weltanschauung* of the late Latin period more within theology than within philosophy itself-and on the expansion of logical questions to include the whole of what is called today philosophy of science, epistemology, and criteriology, as well as much of ontology. [11] Worthy of special mention is the fact that, in the last two Latin centuries (the period of coalescence of what Gracia has recently successfully characterized as " Hispanic philosophy" [12]), intellectual foundations were laid in the university world of the Iberian peninsula for the development of interna-

lasticism, Humanism, Reformed Scholasticism," presented October 15, 1992, at the "Hispanic Philosophy in the Age of Discovery" conference (see note 13 below), esp. Section 3, "From Montaigu to Alcala and Salamanca." See the "History of Semiotics" in my *Basics of Semiotics* (Bloomington, IN: Indiana University Press, 1990), pp. 108-124.

[11] B. Reiser, in his " Editor's Praefatio" to Ioannes a Sancto Thoma (Poinsot), *Ars Logica* (1631-1632), nova editio a Reiser (Turin: Marietti, 1930), p. XII, writes: "Titulis demonstrantibus agit de Logica et de Philosophia naturali. Ex professo neque Metaphysicam neque Ethicam tractat, quare obiter inspicienti de his rebus nihil vel prope nihil dixisse facile videtur. Qui quidem non tantum indicem quaestionum et articulorum, sed ipsum textum eumque totum attente perlegerit, inveniet paene omnia, quae a recentioribus in Ontologia exponuntur, apud ipsum in Logica totum tractatum de causis et de prima motore in Philosophia haberi. Imo et fundamenta Criteriologiae in secunda parte Logicae, in quaestionibus de praecognitis et praemissis, de demonstratione et scientia tangit. Quod auctor de Metaphysica et praesertim de Ethica intra ambitum Cursus philosophici propriis dissertationibus non egit, quamvis dolendum sit, nemini tamen persuadere licet ipsum nihil vel pauca solummodo de his materiis aliis locis scripsisse. Quae ad Theologiam naturalem et ad Ethicam spectant, ad morem illius aetatis ad Cursum theologicum ex professo tractanda remittit, et quidem quae sunt Theologiae naturalis ad primam [Poinsot 1637, 1643 *(=CT Tomus Primus, Secundus et Tertius,* Solesmes ed. Vols. I-IV, Paris: Desclee, 1931, 1934, 1937)], quae sunt Ethicae ad secundam partem Summae theologicae *[=CT Tomus Quartus,* Solesmes ed. Vol. V, Paris: Desclee, 1953; *CT Tomus Quintus et Sextus,* Vives ed. Vol. VI, Paris, 1885) and 1649 *(=CT Tomus Sextus,* Vives ed. Vol. VII, Paris 1885], ubi haec omnia plene evoluta inveniuntur."

[12] Jorge Gracia, "Hispanic Philosophy: Its Beginning and Golden Age," *The Review of Metaphysics* 46.3 (March, 1993), 475-502. I consider this essay to be of breakthrough significance, particularly as concerns the recovery of the

tional law and for dealing with the general problems of cultural
conflict and assimilation. The work of Francisco de Vitoria
(1492-1536), who helped frame the imperial legislation for
Spain's New World territories, comes to mind, as does the figure
of Francisco Suarez (1548-1617), with his rethinking of natural
law. In the area of social and political philosophy, as well as in
the areas of ontology and theory of knowledge, the scholastic fac-
ulties of the principal universities of Portugal and Spain in the
fifteenth, sixteenth, and seventeenth centuries left behind a vein
of pure philosophical gold, which has only begun to be mined as
the prejudices of contemporary scholarship in Anglo-American
and Continental philosophy have begun to crumble in the face of
historical facts at first grudgingly, now with increasing exuber-
ance, brought to light in the academy. [13]

To this later, substantive period belongs the work of Poinsot
as " the author of one of the two great seventeenth-century sum-
mations of medieval philosophy," counterposed thus by Jack
Miles : " Francis Suarez, who wrote the other summation, re-
mained the textbook philosopher of Europe long after Descartes
had given philosophy a new *point de depart.* Poinsot, by con-
trast, was nearly without intellectual issue until he was redis-
covered in this century by Jacques Maritain." [14]

Again we are faced with an ironic situation.   Not only was
Suarez the textbook philosopher through whose *Disputationes
Metaphysicae* almost alone was the thought of the Latin Age
filtered into modern European learning, but Suarez was also
generally taken to be, in this regard, a faithful expositor of

speculative value of the lost centuries separating Occam from Descartes and
the moderns. See my "Vindication of Hispanic Philosophy," forthcoming in
the *Proceedings of the 1•r Congreso Mundial de Semi6tica y Comunicaci6'n:
La Dimension Educativa,* held in Monterrey, Nuevo Leon, Mexico on June
16-18, 1993.

[13] The October 14-17, 1992 "Hispanic Philosophy in the Age of Discovery"
conference organized by Jude Dougherty at the Catholic University of America
was an outstanding augur of developments in this area.

[14] From the text of the original announcement of the publication of *Tractatus
de Signis: The Semiotic of John Poinsot* (Berkeley: University of California
Press, 1985). See my " Semiotic in the Thought of Jacques Maritain,"
Recherche Shniotique/Semiotic   Inquiry 6.2 (1986), 1-30, for details.

Thomas Aquinas. [15] In the early decades of the late nineteenth century Thomistic revival, many and heated debates arose over the question of Suarez's reliability as a guide to the views of Thomas Aquinas. These debates were generally and decisively decided in the negative. But fidelity to St. Thomas was not Suarez's principal concern, and his contribution to philosophy on other grounds is equally beyond question. By contrast, as far as concerns the question of what is and is not consistent with the views of Aquinas in philosophy, as Nuchelmans well put it, the *Cursus Philosophicus* of John Poinsot presents itself as an exemplar "of the powerful tradition to which he belonged and wholeheartedly wanted to belong." [16]

This problem of properly outlining the Latin Age appears further as related to a fact which, in my estimation, has not been taken note of to the extent that it needs to be. I have in mind the fact that the major changes in philosophical epochs happen to correspond in general with the major linguistic changes in Western civilization. Without trying to set forth the reasons here, let me simply remark that there is more than coincidence to the fact that the natural macro-units for the study of philosophy coincide with the major changes in the situation of the natural languages.

[15] " Thomism as formulated by the Jesuit Suarez was universally taught and finally supplanted the doctrine of Melanchthon, even in the universities of Protestant countries" (Emile Brehier, *Histoire de la philosophie: La Philosophie moderne. I: Le dix-septieme siecle* [Presses Universitaires de France, 1938], trans. as *The Seventeenth Century* by Wade Baskin [Chicago: University of Chicago Press, 1966], p. 1).

[16]Gabriel Nuchelmans, "Review" of John Poinsot: *Tractatus de Signis: The Semiotic of John Poinsot,* ed. John N. Deely with Ralph A. Powell, in *Renaissance Quarterly* XL.I (Spring, 1987) 146-149.

Thomas Merton, in *The Ascent to Truth* (New York: Harcourt, Brace and Co., 1951), p. 334, goes so far as to say that Poinsot's "most admirable characteristic is the completeness with which he proposed to submerge his own talents and personality in the thought of the Angelic Doctor .... John of St. Thomas sought only the pure doctrine of St. Thomas Aquinas, which he opposed to the ' eclectic' Thomism of those who, though they may have acquired great names for themselves, never rivalled the Angelic Doctor himself." We see, thus, on several grounds, that the work of Poinsot occupies a heuristically unique position respecting contemporary efforts to rediscover and understand the Latin Age in its integrity.

Thus, the period of Greek philosophy extends from the pre-
Socratics to the end of the dominance of Greek as the language
of learning at the end of the Roman empire in the fifth century.
At that moment the Latin-speaking peoples were thrown back
on their own resources, and the indigenous development of philos-
ophy from a Latin linguistic base began.[17]   This development
would dominate until the seventeenth century, when again a
linguistic sea-change occurs with the emergence of the European
national languages as the principal medium of mainstream philo-
sophical discourse. Modern philosophy, not coincidentally, rises
against Latin scholasticism on the tide of the emerging natural
languages. The post-modern period, again, coincides with a
breakdown of the modern national linguistic compartmentaliza-
tions, as a new global perspective begins to emerge beyond na-
tional differences of language.   This emerging perspective is
based not on a unity of natural language, as in the previous three
epochs, but on the achievement of an epistemological paradigm
capable of taking into account the very mechanisms of linguistic
difference and change as part of the framework of philosophy it-
self. By developing in this way, postmodernism takes up again
themes in logic and epistemology that developed strongly in the
last two centuries particularly of Latin thought.

Here, however, we can do no more than examine some of the
prejudices which have served so far to obscure this fact.

3. The Historical Prejudices

A. *The Cartesian Heritage*

If we except the powerful filter of Anglo-American bias against
things Hispanic in general, so well documented today in the work
of Philip W. Powell [18] and so far best defined historically for

[17] See "The Indigenous Latin Development," in my *Introducing Semiotic*
(Bloomington, IN: Indiana University Press, 1982), pp. 23-41.
[18] Notably his classic study, *Tree of Hate: Propaganda and Prejudices
tl.ffecting United States' Relations with the Hispanic World* (New York:
Basic Books, 1971 ; reprinted, with a new " Introduction" by the author,
Vallecito, CA: Ross House Books, 1985).

philosophy by Jorge Gracia (a bias which I am not equipped to discuss in the full scholarly manner required for its diminution and eventual dissolution), no doubt the most effective obstacle in contemporary consciousness to the appreciation of the late Latin work in philosophy is the heritage of Rene Descartes (1596-1650). By this I mean the general prejudice Descartes engendered against the importance of history for the philosopher, fancied by Descartes to be a man rightly concerned only with the book of the world in its present state of existence as open directly to personal experience, and especially with what can be found within himself.[19] Philosophy in its historical dimension Descartes saw as the very paradigm case for dismissal in the search for philosophical truth. Whereas Aristotle's meditations on first philosophy (c.348-330BC) led Aristotle first to consider the views of his predecessors, the meditations of Descartes (1641) led Descartes first to dismiss his predecessors, as he had so frankly told us his meditations would.[20]

Of course, historicity as an irreducible condition of human knowledge was no less a part of the human situation in Descartes's day than in our own. If Descartes had merely been an-

[19] Descartes, to be sure, did not see himself as engendering a general prejudice against history of the sort most harmful to the human mind in its search for truth in matters philosophical. The very opposite! He saw himself as opening the way to wisdom and truth itself in philosophy. " Resolving to seek no knowledge other than that which could be found in myself or else in the great book of the world," he tells us in 1637, "I have had much more success, I think, than I would have had if I had never left my country or my books " *(Discourse on the Method of Rightly Conducting One's Reason and Seeking Truth in the Sciences,* trans. Robert Stoothoff, in *The Philosophical Writings of Descartes,* ed. John Cottingham, Robert Stoothoff, and Dugald Murdoch [Cambridge, England: Cambridge University Press, 1985], Vol. I, p. 115).

[20] Descartes, *Meditations on First Philosophy,* trans. John Cottingham in *The Philosophical Writings of Descartes,* ed. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge, England: Cambridge University Press, 1985), Vol. II, pp. 114-115: "Regarding philosophy, I shall say only this : seeing that it has been cultivated for many centuries by the most excellent minds and yet there is still no point in it which is not disputed and hence doubtful, . . . And, considering how many diverse opinions learned men may maintain on a single question-even though it is impossible for more than one to be true-I held as well-nigh false everything that was merely probable."

ticipating the contemporary insight that all history is present his-
tory, or that present experience inevitably colors our understand-
ing of the past and evaluation of its sources, his heritage in this
area would be anything but pernicious. Yet Descartes promotes,
in his *Discourse on Method* (loc. cit., p. 112), lack of insight
rather than insight regarding tradition : " when I cast a philo-
sophical eye upon the various activities and undertakings of man-
kind," he tells us, "there are almost none which I do not con-
sider vain and useless."

   Descartes's illusion that he was beginning philosophy anew
with his own experience and consciousness free from any de-
pendence on history was no less an illusion for his commitment
to it as true. All the work accomplished in this area beginning
with Gilson has not yet been enough to free most of our con-
temporaries from the crippling assumption that the history of
philosophy is essentially peripheral to whatever philosophy's main
task maybe.

   Poinsot, although of the same generation as Descartes, could
not have stood in fuller contrast in his attitude toward history. He
was irrevocably committed to the importance of tradition in phi-
losophy at the very historical moment when the exuberance of
modern discoveries in areas we now call science, in contrast to
philosophy, was encouraging men to dismiss tradition as an ob-
stacle to the adoption of new methods and concentration on prob-
lems framed in a way alien to traditional concerns. At just the
moment that Poinsot, as Simonin rightly said,[21] was determined
" to remain a man of the past and to arrange his work in its
totality according to the pattern and methods of long-standing
tradition," Descartes-and with him, modernity-was   deter-
mined to jettison the patterns and methods of Latin tradition in
favor of a new pattern and new methods better suited to the inte-
rests of understanding the world in its empirical guise as ac-
cessible to present experience and to control through experiment-
al designs.

   [21] H.-D. Simonin, review of the 1930 Reiser edition of Poinsot's *Ars Logica*
of 1631-1632,*Bulletin Thomiste* [September 1930], p. 145.

There is great irony in this situation. For while it is true that these two emphases are clearly opposed as attitudes of mind, it is equally true that the opposition, philosophically considered, is a superficial one, reducible to the difference between philosophical doctrine and scientific theory as complementary theoretical enterprises, as the latter cannot develop except on assumptions whose validity can be adjudicated only with recourse to the former. The principles for resolving the conflict of attitudes were equally available to Descartes and to Poinsot in the traditional writings Descartes chose to turn away from, even if the differing attitudes themselves were too little understood to allow for such application in detail. *Prise de conscience* always requires some reflective distance, and this was not available to the men caught up in the present of that time.

Today we see clearly that the object of science, while transcending perception, always concerns and essentially depends upon what can be directly sensed within perception, whereas the object of philosophy concerns rather the framework as such of understanding according to which whatever is sensed and perceived is interpreted. This object is not reducible to language, but is nonetheless accessible only through language. Debating whether the atom can be split, the scientist can ultimately resort to an experiment *demonstrando ad sensus.* Debating whether God exists, or what are the nature of signs such that they can be used to debate about objects such as atoms (which depend upon material conditions) or spirits (which by nature would not depend upon matter, especially in the case of God), the philosopher never has the privilege of falling back upon such a "crucial experiment."   From first to last, philosophy has only a *demonstratio ad intellectum* whereon to rest its case. Science is the domain of experiments. Intellectual doctrine as irreducible to what can be manifested as decisive in an empirical frame is the domain of philosophy. There are many areas in the development of hypotheses and the elaboration of frameworks for the testing of hypotheses where, to be sure, philosophy and science overlap. But ultimately there is always the difference between *scientia* as what can occasionally be

negatively reduced to a crucial experiment *demonstrando ad sensus,* and *doctrina* as a body of thought sensitive to its own implications and striving for consistency throughout, while achieving explanations (however provisional) at a level beyond what can be empirically circumscribed in unambiguous ways. [22]

Today, we would be more inclined to admire Poinsot's attempt "to let no new achievements be lost, and to profit from the final developments of a scholasticism which has exhausted itself in the plenitude of its refinements " (Simonin, ibid.) and less inclined to be taken in by Descartes's denigration of "the various activities and undertakings of mankind " as " vain and useless " (*Meditations, ed. cit.,* p. 112).   But habits which have taken hold for three centuries die hard. In our classrooms today and for the foreseeable-but   perhaps not indefinite-future,   the meditations of Descartes are still likely to be read and discussed rather than the tractates of Poinsot, for two principal reasons.

First, the comparative poverty of Descartes's texts makes them much easier to grasp: on the surface at least, no more is required of the reader than conversance with the language in which the text itself is presented. By contrast, in the case of Poinsot's work, even on the surface, " the reader is not granted dispensation from knowledge of the dialogue, implicit in the work, with the centuries-old strata of commentaries and discussions of the Aristotelian corpus." [23]

Second, the style of the Cartesian texts better suits the modern frame of mind, though this may be changing. D. P. Henry remarks that "the supremely professional character of Poinsot's extensive text, along with the dazzling scope revealed by the huge synoptic table of the work, are, one feels, immensely superior to

[22] On the contrast of *doctrina* with *scientia* in the modern sense, see the terminological entry "Doctrine" in the *Encyclopedic Dictionary of Semiotics,* ed. T. A. Sebeok et al., and Appendix I "On the Notion 'Doctrine of Signs'" in my *Introducing Semiotic* (Bloomington, IN: Indiana University Press, 1982)' pp. 127-130.

[23] Maria Lucia Santaella-Braga, "John Poinsot's Doctrine of Signs: The Recovery of a Missing Link," *The lournal of Speculative Philowphy,* New Series, 5.2 (1991), p. 156.

the rather chatty tone of his contemporary Descartes-a tone
symptomatic of philosophy's decline towards the drawing-rooms
of ' well-bred company and polite conversation ' favored by
Locke." [24] We are already in a postmodern period, *to* be sure,
but we have not been there long enough to achieve the reflective
distance presupposed for a general *prise de conscience* appropriate
to this change of age.

Descartes and Poinsot, contemporaries in the glorious seven-
teenth century, are alike doorways to the past. The past into
which Poinsot's work gives entry spans the full twelve-hundred
years of the Latin age, but brings into particular focus its last
three centuries as seen from Iberia. The past into which Des-
cartes's work gives entry spans, by contrast, no more than an
anticipation and launching of the three centuries of modernity's
determined effort to present itself as the once and for all truth
owing nothing to history.

B. *Eztension'.s of the Cartesian Heritage: Scholarly,*
Religious, and Ideological Prejudices

A substantive point about ideology needs to be made concern-
ing the last three centuries of the Latin development, which are
(ab) normally neglected in the standard presentations to date of
so-called " medieval philosophy " in relation to so-called " early
modern philosophy." In the standard discussions of Latin
thought, serious presentation ends with William of Occam
(c.1285-1347), and takes up again with Descartes (1596-1650),
whence follows the discussion of the classical modern develop-
ment as culminating in Kant's work. Though seldom so nakedly
stated, the common attitude of scholars for decades has been that
of Matson : " William of Ockham was the last of the great crea-
tive scholastics. The three centuries following his death are a
philosophical desert." [25] Desmond FitzGerald has rightly char-

[24] " The Way to Awareness," review of Deely edition of Poinsot's *Tractatus
de Signis* in *The Times Literary Supplement* no. 4,413 (October 30-November
5, 1987)' p. 1201.

[25] Wallace I. Matson, *A New History of Philosophy* (New York: Harcourt
Brace Jovanovich, 1987), vol. 2, p. 253.

acterized this remark as "an absurd comment." [26] Yet its ab-
surdity does not gainsay its accuracy as a summation of the stand-
ardized attitude toward and treatment of Latin thought of the late
fourteenth to early seventeenth century.

When a prejudice is so naked, how does it manage to take
root in the first place, let alone survive and thrive even in the most
learned circles of academe? The answer to this question lies in
the details of the history of the period, no doubt, and in the polit-
ical, social, and economic dimensions even more than in the in-
tellectual dimensions, as Powell (note 18 above) has made clear.
Intellectual history pertains to culture as such; yet culture as such
depends upon and develops through-in a word, *lives* by-the
sociological realities of social interaction. Hence it is often
only long after the passions and occupations of sociological life
have faded and altered in their basic constellation that intellectual
history is able successfully to double back on itself and to recover
what had always been available to it just beyond the gulf created
by passions of the historical moment.

Such is decidedly the case with the missing period in philos-
ophy's history between Occam and Descartes. Appropriate cate-
gories for understanding this gap in the standard general his-
tories are only beginning to be developed by scholars. The most
important recent work in this problem area, in my estimation, is
Jorge Gracia's above-mentioned establishment of the category of
"Hispanic philosophy" as "a general category [essential] to
bring out the philosophical reality encompassed by the Iberian
peninsula and Latin America," and to "do justice not only to
the historical relations between Iberian and Latin American phi-
losophers, but also to the philosophy of Spain, Catalonia, Por-
tugal, and Latin America." [21] The diverse elements which make
up the philosophy of Spain, Catalonia, Portugal, and Latin
America, and which uniquely bind the Iberian peninsula and
Latin America, have either been ignored completely in standard

[26] Desmond J. FitzGerald, "John Poinsot's Tractatus de Signis," *Journal
of the History of Philosophy* XXVI.1 (January 1986), p. 430.

[21] Gracia, art. cit., p. 480.

histories of philosophy, or have been inappropriately parcelled out along political, territorial, racial, or national linguistic lines which do not convey the cluster of historical ties which constitute the universe of Hispanic philosophy. Yet just these are the elements which, properly arranged and understood, make up, as Gracia puts it (art. cit. p. 486), " the thought of the world created by the European discovery of America."

From this forgotten late Latin Iberian or Hispanic universe, in fact, the work of Poinsot comes, and it belongs to this universe as a boundary point relative to the classical early modern period. This situation of Poinsot's work becomes clear from the following list of the principal figures definitive of " the first period of philosophical development that properly merits being called Hispanic" (Gracia, *art. cit.,* pp. 486-487):

Its first notable figure is Juan de Zumarraga (1468?-1548) and its last is Juan de Santo Tomas (John Poinsot) (1589-1644). In between are Bartolome de las Casas (1484-1566), Vasco de Quiroga (1487?-1568), Juan Luis Vives (1492-1540), Francisco de Vitoria (1492/3-1546), Domingo de Soto (1494-1560), Alonso de Castro (1459-1558), Alonso de la Vera Cruz (1504?-1584), Francisco de Salazar (1505-1575), Mekhior Cano (1509-1560), Pedro da Fonseca (1528-1599), Domingo Bafiez (1528-1604), Tomas de Mercado (1530-1575), Francisco Toletus (1532-1596), Luis de Molina (1535-1600), Benito Pereira (1535?-1610), Juan de Mariana (1536-1624), Antonio Rubio (1548-1615), Francisco Suarez (1548-1617), Gabriel Vazquez (1549-1604), Antonio Arias (1564-1603), and Alfonso Briceno (1587-1699), among many others. Territorially, it covers the Iberian peninsula and the Iberian colonies in the New Warid. In the Iberian peninsula certain universities stand out, such as Salamanca and Coimbra, but others, like Valladolid, Segovia, Alcala, and Evora, follow closely. In the New World, the most important centers of activity are found in Mexico and Peru, particularly in the capital cities of Mexico City and Lima, although there are also developments in other areas.

Thus, while the neglect of these figures and their period, as Gracia says (ibid., pp. 478-479) " makes no historical sense " intellectually speaking, it makes all too much sense when we consider ideology and religious prejudice as stemming precisely from

that period and pervading later centuries. In particular, ideologi-
cal religious prejudices on both sides of the "Reformation" have
independently conspired in modern times to consign the period in
question to oblivion, both in the English-speaking world and in
cultural zones dominated by central European civilization. On
one side, Protestant scholars have tended to neglect this period
because it was dominated by thinkers associated with the Roman
Catholic Church. On the other side, Catholic scholars have neg-
lected this period because it does not fit at all with a general pre-
occupation to find ways of disentangling the concerns of Church
and State in secular political life.

   On top of this general preoccupation, the nineteenth century
revival of the study of St. Thomas Aquinas mandated by Leo
XIII translated into a concern-more or less narrow-minded as
it actually developed in the contemporary period-to demonstrate
the thought of Thomas Aquinas by using his *actual vocabulary*
as a criterion of purity. Such practice excluded from serious con-
sideration work of later Latins who departed from the vocabu-
lary, perforce, in applying philosophical principles to new ques-
tions (and new emphases on old questions) generated within
their own social and cultural contexts. My description of this
practice might seem exaggerated, but it is attested to by the great-
est historian of the revival, Etienne Gilson. " I myself, who have
lived in the familiarity of St. Thomas Aquinas," Gilson wrote
me (letter of 10July1974), "have not continued reading [John
of St. Thomas] when I realized that he was not using the same
language as that of our common master."

   I suspect that we find in this attitude of linguistic limitation
an evidence of the Cartesian influence even across the divide of
religious scholars agreeing for different reasons to neglect the
closing centuries of Latinity. Surely it is a notable example of
self-referential inconsistency that the Thomists of Gilson's school
have applied to the matter of interpreting Aquinas a method in
effect Cartesian : there is but a single optic, discovered only in our
day, which allows for a correct reading of the Aquinian corpus.
Viewed through this optic, each of the commentators of

the period of Classical Thomism [28]-Capreolus (c.1380-1444), Thomas de Vio Cajetan (1468-1534), Ferrariensis (c.1474-1528), Francisco Vitoria (1492/3-1546), Dominic Soto (1494-1560), Melchior Cano (1509-1560), Domingo Banez (1528-1604), and John Poinsot (1589-1644)-appears to be an un-reliable interpreter, either for failure to stress enough the centrality of *esse* as became the fashion of the Thomistic revival (limited exception on this point is made for Banez), or because, as has been said, the commentator, in dealing with problems beyond the purview of Aquinas's focal concerns in any given text, perforce introduces terminology not to be found in the master and therefore suspect. In a letter of 28 August 1968, Gilson wrote to me in this regard that " ' A thomist ' of whatever brand should find it superfluous to develop a question which Thomas was content to pass over with a few words," because " it is very difficult to develop such a question with any certitude of doing so along the very line he himself would have followed, had he developed it. If we develop it in the wrong way, we engage his doctrine in some no thoroughfare [i.e., a dead end], instead of keeping it on the threshold his own thought has refused to cross, and which, to him, was still an assured truth."

Years later, when I was charged with the organization of the 1994 Special Issue of *The New Scholasticism* [29] in honor of John Poinsot, I again encountered this attitude. A distinguished alumnus of the Toronto school Gilson founded, a fellow Dominican with Poinsot, declined invitation to participate in the Special Issue on the ground that his own approach to all questions " is not through John Poinsot but through Thomas Aquinas," and therefore, he felt, it would take him too far afield from his con-

[28] I have explained the designation " Classical Thomism " in an article titled "Metaphysics, Modern Thought, and 'Thomism'" written for *Notes et Documents* 8 (juillet-septembre 1977), which unfortunately was published from uncorrected proofs, but provides nonetheless a sound outline of what is at issue.

[29] The name of this journal was subsequently changed to the *American Catholic Philosophical Quarterly,* a change difficult to understand after sixty-three years of publication.

cern with the thought of Aquinas to delve deeply into the texts of Poinsot. That Poinsot himself is among the historical hand- ful who had developed an intimate acquaintance with the com- plete range of Aquinas's writings and made this acquaintance his own reference point, along with reason itself, in the evalua- tion of theoretical issues in philosophy is to count for nothing. [30] Only the author's own reading of Aquinas, solipsistically under- taken and maintained, is to count. Of course, the solipsism is an illusion insofar as the reader thinks himself to be a pristine in- terpreter of whatever truth Aquinas has to convey, just as the presumption of Descartes to shrive his mind of all influence from society and history was an illusion (a transcendental one at that, inasmuch as it contained within itself the clues of previous-by definition historical-influences, as Gilson was to demonstrate in his doctoral work published in 1913). [31]

Bergson used to speak of the " natural geometry of the human intellect " in order to explain its resistance to time and to seeing the development of things in time. Perhaps the Cartesian preju- dice with its various ramifications, more or less unconscious, is nothing more than the formalization and explicitation among philosophers of a resistance to history that is engrained in human understanding according to its natural proclivity for seeing parts as wholes and present phenomena as eternal species.

However that may be, there is resistance among philosophers and scientists alike to recognizing the historicity of human thought in all particulars. This resistance-powerfully reinforced by the belief Descartes fostered as the father of modern philos- ophy that Latin tradition is a nest of errors that can be safely ignored in beginning philosophy anew on the basis of individual experience and modern scientific methods-has had a twofold baneful influence on work in philosophy. On the one hand, it has given us secular historians of philosophy who look back to the Latin Age only insofar as it can be made to reflect the narrow

so See the remark of Thomas Merton on this point in note 16 above.

si *Index Scolastico-Cartesien* (thesis at the Universite de Paris; Paris: Akan).

linguistic and logical concerns of recent Anglo-American philosophy. On the other hand, it has given us religious historians of philosophy who look back to the Latin Age only insofar as it can be made to reflect either the strict terms of their papal mandate (in the case of Catholics) or their sectarian preferences overall (in the case of Protestants). Among other things, this bias has led to a natural focus on William of Occam as the reputed father of Nominalism in modern thought, particularly as late modern thought, in assuming a mantle of logicism after Frege and Whitehead-Russell, came more and more to fancy itself nominalistic.

4. Conclusion

By a curious confluence of independent reasons, those scholars interested in philosophy's history, both secular and religious, have unwittingly conspired to neglect the key figures important to the development of thought in the last centuries of the Latin age. This neglect has been unfortunate for two reasons. First, speculative thought in the closing Latin centuries saw powerful developments in epistemological theory which resonate with the central developments of postmodern contemporary thought. Second, there is the truth of Gilson's analogy, [32] according to which history provides for the philosopher what the laboratory provides for the scientist, namely, the arena in which the consequences of ideas are played out.

Miller describes this idea that the work of philosophy must proceed through a study of history in order to achieve its best results as among "the most lasting lessons Foucault learned from his teacher," Jean Hyppolite. [33] In any event, it is one of the defining ideas of postmodernism, and certainly an idea that makes incumbent on us the proper investigation of philosophy's past, in particular the late centuries of the Latin Age whose intellectual

[32] In Etienne Gilson, *The Unity of Philosophical Experience* (New York: Scribner's, 1937).

[33] James Miller, *The Passion of Michel Foucault* (New York: Simon & Schuster, 1993), p. 41.

treasures have too long been lost to our contemplation. In the
work of this investigation, the work of John Poinsot provides the
contemporary researcher with a heuristic tool of incomparable
value, both for guessing where to look and for assaying the re-
sults of what is found-even,   as Jeffrey Coombs has recently
demonstrated, [34] for adjudicating   claims of contemporary ex-
positors to have divined the true thought of St. Thomas on this
or that special question.

[34] See Jeffrey S. Coombs, "John Poinsot on How To Be, Know, and Love
a Nonexistent Possible," in *American Catholic Philosophical Quarterly,* Vol.
LXVIII,   No. 3 (Summer 1994), 333-346.

LANGUAGE, COMMUNICATION, AND REPRESENTATION IN THE SEMIOTIC OF JOHN POINSOT [1]

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1) Language and the Semiotic of John Poinsot

HE SEMIOTIC of John Poinsot is to the study of gns what physics is to the study of nature. Physics is oth the most fundamental and the most general science of nature. All natural processes, from the motion of planets to the division of cells, are governed by, but not only by, laws of physics. Similarly, the semiotic of John Poinsot (traditionally known by his Dominican name, John of St. Thomas) is the most fundamental and general science of signs. The actions of all signs -from natural signs such as footprints and symptoms of disease, to signs of communication, such as logical operators and linguistic signs, to signs in cognition, such as concepts and percepts-are governed by, but not only by, the fundamental relational logic of semiosis set forth in his *Ars Logica* [1632]. If C. S. Peirce can be said to give us a chemistry of sixty-six sign-compounds, John Poinsot, suitably revised, gives us the basic physical laws of motion that bring sign, object, and mind into relation. [2]

[2] The first modern author to point this out was Jacques Maritain, especially in *"Signe et symbole," Revue Thomiste* 44 (April 1938), pp. 299-300 and

What I wish to explore here is the question: To what extent does the semiotic of John Poinsot account for the meaning of linguistic signs ? In one sense, we cannot expect such a fundamental and general theory of the action of signs to tell us much about language. Language is a surpassingly complex and, in many ways, a unique sign-system. Expecting a general theory of signs to capture the meaning of the linguistic sign is like expecting physics to explain reproductive biology. In another sense, though, we ought to expect his semiotic to illuminate that preeminent system of signs, human language. For in addition to

"Le Langage et la theorie du signe," Anne.:re au chapitre II of Quatre essais sur !'esprit dans sa condition charnelle (Nouvelle edition revue et augmentee; Paris: Alsatia, 1956), pp. 113-124. This latter essay appears in a modestly amplified English version, " Language and the Theory of Sign," from *Language: An Enquiry into Its Meaning and Function,* edited by Ruth Nanda Anshen (New York: Harper and Brothers, 1957), pp. 86-101; and, fully annotated in relation to Poinsot's *Tractatus de Signis,* it has been reprinted in *Frontiers in Semiotics,* edited by John Deely, Brooke Williams, and Felicia Kruse (Bloomington, IN: Indiana University Press, 1986), pp. 51-62.

Following Maritain, a number of authors have attempted to apply Poinsot's semiotic to contemporary debates. I note the principal ones in chronological order: John A. Oesterle, " Another Approach to the Problem of Meaning," *The Thomist* 7 (1944), pp. 233-263; John Wild, "An Introduction to the Phenomenology of Signs," *Philosophy and Phenomenological Research* 8 (December 1947), pp. 217-244; Henry B. Veatch, *Intentional Logic* (New Haven: Yale University Press, 1952).

Poinsot's *Treatise on Signs* was originally published in 1632 as a small part of volume 2 in the original five volumes (Alcala, Spain: 1631-1635) of his philosophical writings. These five volumes have been published as three volumes under the title *Cursus Philosophicus Thomisticus* in the modern edition by Beatus Reiser (Turin: Marietti, 1930, 1933, 1937). The first independent presentation of Poinsot's complete *Tractatus de Signis* was prepared by John Deely in consultation with Ralph A. Powell and published in bilingual critical edition (Berkeley: University of California Press, 1985). Since the publication of this edition of the *Tractatus,* two major critiques and reconstructions of Poinsot's analysis of the logic of the sign relation and its divisions have appeared: John Deely, "The Semiotic of John Poinsot," *Semiotica* 69-112 (April 1988), pp. 31-127; and James Bernard Murphy, "Nature, Custom, and Stipulation in the Semiotic of John Poinsot," *Semiotica* 83-1/2 (1991), pp. 33-68.

In this article, I will cite from the Reiser edition of Poinsot's *Cursus Philosophicus Thomisticus* only those texts not included in Deely's edition of the *Tractatus de Signis.*

Poinsot's generic account of the logical and metaphysical features common to the action of all signs whatsoever, he also sets forth some of the *di[ferentiae* defining various species of signs. For example, his account of the relation of the customary to the stipulated sign is meant to reveal the specific differences of the linguistic signs. Moreover, we must recall that Poinsot's semiotic is embedded in his logic-in his analysis of terms, propositions, and systems of inference. So we may expect Poinsot's semiotic to provide a theory of language at least insofar as language is an instrument of logical reasoning. Indeed, as we shall see, Poinsot's semiotic illuminates much more than the strictly logical properties of language.

I will set forth two different models of language and I will then use these models to explore the strengths and the weaknesses of Poinsot's account of the linguistic sign. In the first model, language is understood as a medium of communication: if I wish to get someone to believe or to do something, one way to accomplish this goal is to use linguistic signs. There are other media of communication, such as gesture, facial expression, pointing, etc., but language is quite effective in making an impression on another mind. In this model, language is assimilated to the realm of human action in general; speech acts (that is, the use of what are called " performatives ") are but one instrument through which human beings pursue their goals. Here the point of view is that of the agent: to understand deliberate human action we must first look to the intentions (purposes) of the agent. Thus, to understand human communication we first ask: what did he mean by that ?-whether he said something or merely slammed the door. In the philosophy of language, this model of communication used to be called " rhetoric " and is now called " pragmatics."

In the second model, language is viewed as a system of representations that facilitate cognition by providing a perspicuous set of symbols to convey information about the world, about our own thought, and about the thought of other people. Language on this model gives articulate form to the buzzing, blooming

world of sense experience as well as to the vague, chaotic world
of thought and feeling. In this model, language is assimilated to
the realm of cognition in general: words and sentences direct the
mind to objects of knowledge just as natural signs such as symp-
toms, smoke, or clouds direct the mind to their objects. Here the
point of view is that of the interpreter : to understand a repre-
sentation we must look to the object represented.   Thus, the
question we first ask of any representation is : what does it mean?
In the philosophy of language, the study of representations used
to be called " logic " but is now called " semantics."

    What is striking about these two models of language is that
each plausibly claims to provide an adequate theory of linguistic
meaning: for semantics, the rules for determining the meaning of
the linguistic expression (that is, what it represents to an inter-
preter) are what counts while the intentions of the speaker are
relegated to the " context " ; for pragmatics (especially that of
H. P. Grice), the communication intentions of the speaker are
what count and the literal meaning of the sentence is merely part
of the context. The distinction between these two models is
especially evident when the meaning of an expression is different
from what a speaker means by that expression: A speaker may
mean something true by saying something false, as with meta-
phor; a speaker may mean the opposite of what his expression
means, as with sarcasm; a speaker may at once assert and deny
an expression, as with irony; a speaker may mean more than
what he expresses, as with conversational implications and indi-
rect speech acts.

    Such discrepancies between literal meaning and speaker's
meaning have led many linguists and philosophers to seek a re-
conciliation of our two models of language, to seek for a unified
conception of linguistic meaning. Some semanticists, for ex-
ample, are adding illocutionary force indicators to propositional
content indicators ; others are adding illocutionary force to sense
and denotation as the basic elements of meaning. [3] At the same

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a See Mark de Bretton Platts, *Ways of Meaning* (London: Routledge and
Kegan Paul, 1979), pp. 68-94.

time, some pragmatists have added to the old truth conditions of propositional content the new condition of successful performance of the illocutionary act.[4]

However, because semantics and pragmatics employ different units of linguistic analysis, such jerry-rigged efforts to combine pragmatic and semantic analyses have not led to a unified conception of meaning. Because semantics is based on a cognitive model of representation, the units of analysis are the elementary units of linguistic representation, namely, the word and the sentence. Yet because pragmatics is based on a model of communicative action, its unit of linguistic analysis is the performance of a speech act. People do not utter words or sentences; rather, they make assertions, issue directives, commissives, expressives, and make declarations by using words and sentences. According to pragmatists, stating a proposition, making a reference, predicating something of something, are all deliberate acts of an agent. Saying that a sentence predicates something or refers to something can only mean that a speaker uses sentences to perform the action of predicating and referring. Part of the meaning of an asserted proposition, for example, is the speaker's commitment to the truth of that proposition; therefore, propositions are not merely signs of their objects the way symptoms are signs of diseases.[5]

Although there are superficial signs of convergence everywhere, pragmatics and semantics resist unification, I believe, be-

4 "--- illocutionary acts with propositional content have in virtue of their logical form both conditions of success and conditions of satisfaction. Moreover, their conditions of satisfaction are dependent on the truth conditions of their propositional contents. As a consequence of this, there are two sets of semantic values in general semantics, namely: 1) the set U-s of success values which are success (or successful performance), and insuccess (or non-performance) and 2) the set U-t of truth values which are truth and falsehood." Daniel Vanderveken, *Meaning and Speech Acts* (Cambridge: Cambridge University Press, 1990), pp. 41-42.

5 " The unit of linguistic communication is not, as has generally been supposed, the symbol, word or sentence, or even the token of the symbol, word or sentence, but rather the production or issuance of the symbol or word or sentence in the performance of the speech act." John Searle, *Speech Acts* (Cambridge: Cambridge University Press, 1969), p, 16.

cause each approach embodies a profound and yet opposed model of language. Each model illuminates one side of the linguistic moon only by casting a shadow over the other side. P. F. Strawson has described the conflict between semantics and pragmatics as "a Homeric struggle." [6] A truly unified theory of linguistic meaning, if we ever get one, will probably have to be cast in quite different categories.

My task, however, is not to unite but to distinguish. I will develop in detail the opposition of these two models to reveal not only the multi-dimensional character of language but also the multi-dimensional character of the semiotic of John Poinsot. In this way, I hope to distinguish those aspects of linguistic meaning illuminated by Poinsot's semiotics from those aspects made obscure. Predictably, we will discover that Poinsot's semiotic is resolutely representational in character, as any general theory of signs must be.[7] Surprisingly, we will also discover the rudiments of a theory of linguistic communication scattered throughout his *Treatise on* Signs-rudiments that are not likely to be found unless one is looking for them. Does this mean that the semiotic of John Poinsot actually can account for the complexity of linguistic meaning? Or are his insights into the communicative dimension of language superfluous to the basically representational logic of his general theory of signs ?

[6] After citing Straw son's remark, John Searle comments: " But the fundamental insight of each theory seems to me correct; the mistake is to suppose that the two theories are necessarily in conflict." See Searle, "Meaning, Communication and Representation," in *Philosophical Grounds of Rationality,* edited by Richard E. Grandy and Richard Warner (Oxford: Clarendon Press, 1986), pp. 209-226 at 225.

[7] Poinsot's formal definition of a sign perfectly captures the cognitive model of language: " That which represents something other than itself to a cognitive power." See Poinsot, *Tractatus de Signis,* p. 25/11. As we shall see below, Poinsot explicitly contrasts representation with signification, in that all signification involves representation, but not all representation involves signification. Except in the context of such a contrast, I will use representation to mean signification.

2) The Communicative Dimension of Language

The notion of communication would appear to be ideally suited to the description of language. If language is not a medium of communication, then what is it? Recall, however, that the notion of representation also appeared ideally suited to the description

of language-is not language a system of signs ?-but that, under scrutiny, the semantic model of linguistic meaning failed to capture much of what linguistic utterances mean. Just as there are hybrid semantics that attempt to capture some of the speaker's intentions by the patchwork of illocutionary force indicators, so there are hybrid models of communication. For example, communication theory (or, as it is often called, " information theory ") is a hybrid between pure communication and pure representation. In communication theory, a message originated by X is encoded by the transmitter into a signal; the signal is sent over a particular communication channel to the receiver; the receiver decodes the signal into a message and passes the message on to Y.[8] In this model, we may distinguish the pure communicative element (the transitive action of X on Y) from the semantic element involving the encoding and the decoding of " signals."

What do I mean by the pure communicative element? If we look at the etymology of communication and the semantic field of related words, I think we can infer a core meaning.[9] The Latin noun *communicatio* means a making common (*communis),* a sharing: we still say that one communicates one's property to others. In rhetoric, *communicatio* was used to translate the Greek figure of speech *anakoinosis,* in accordance with which a speaker turns to his hearers, and, as it were, allows them to take part in the inquiry by saying "we" instead of " I" or "you." [10] Here

[8] This description of communication is from John Lyons, *Semantics* vol. 1 (Cambridge: Cambridge University Press, 1977), p, 37.

[9] For Latin meanings I rely on Lewis and Short's *Latin Dictionary;* for English meanings I rely on the *Oxford English Dictionary.*

[10] In sixteenth-century English rhetoric, this figure of speech is called "communication."

the speaker communicates with his audience, not by conveying information but by, so to speak, sharing the podium. This rhetorical trope captures some of the characteristic uses of " communicate" in everyday life, as when we say: "he communicated " his feelings, sentiments, attitudes emotions. I take it that what communicate means in these expressions is not that he encoded his feelings, sentiments, emotions and then transmitted them to a receiver, who then decoded them. Rather, what is meant is an unmediated sharing of intentional states; when I communicate such states my object is not to have them interpreted but shared. I want others to participate in my intentions : I want to connect when I communicate. Even though it may well be physically or psychologically impossible to communicate an intentional state unmediated by signs, the limiting case of communication would have to be telepathy.

Thus, one element of communication is the shared participation of communion: to communicate used to mean " partake of Holy Communion " and " to administer Holy Communion " ; those who participate in communion are called communicants. Communication in this sense is not the transfer of a gift from one person to another; it is not a zero-sum game in which what is communicated is lost by one person and gained by another. Instead, communication is the creation of a common good between persons, the *communio* of friendship, church, and marriage. As we shall see, one of the dimensions of linguistic communication is precisely the attempt to create such a direct sharing of intentional states.

The Latin verb *communico* means in its original sense to divide something with someone (*aliquid cum aliquo)* ; that is, to give someone something by sharing it with him. We can thus see the relation between communication as shared communion and communicate as the transitive action of giving something to someone: I impart something to someone in order to create something common between us. In English the verb communicate often means an unmediated transitive relation: a disease is communicated

from one person to another; motion is communicated from one body to another; heat is communicated from one vessel to another. When we say that the dressing room communicates with the bedroom, we do not mean that they are passing messages! What these usages convey is the notion of an unmediated and therefore non-semiotic relation between entities.

Distinctively human communication is a deliberate action by an agent to share an intentional state with his audience. Not only is language not necessary for such communication, but language can often be an obstacle. What is more eloquent than a tear or a smile? Indeed, often when we most desire to communicate with someone-that is, to be in communion with them-we either say nothing or we say something deliberately meaningless like " it is raining" as we both look out the window-as if to underscore that what we seek is not to convey information but to share a common concern. This is not to deny that human communication normally proceeds through linguistic representation ; rather, I wish only to suggest that the intention to communicate is different from the intention to represent and that the two intentions can work at cross purposes. When we communicate with God through the repetitive litanies of prayer we do not intend to represent anything to Him.

Rhetoric is to communication what logic is to representation. Logic uses signs in order to represent the truth ; logical argument seeks to convince all rational minds indifferently. Rhetoric uses signs in order to influence minds : rhetorical argument is tailored to persuade particular audiences. Put in pragmatic terms, rhetoric is the use of illocutionary speech acts deliberately to create perlocutionary effects. Rhetors make use of assertives, commissives, directives, expressives, and declaratives in order to persuade, frighten, reassure, or embarrass the audience. Rhetoric is especially effective when it appeals to our sub-rational beliefs and fears; by making "contact" with our deepest prejudices, the rhetor is able to communicate his beliefs directly to our minds-seemingly unmediated by reason. The emphasis in rhetorical

theory and practice on making contact with the audience reveals the communicative as opposed to representational intention. [11]

Language is communicative to the extent that the aim of a speech act is contact with another person's mind; language is representational to the extent that the aim of a speech act is to bring one's own or another person's mind in contact with some object or state of affairs. In this sense, expletives, obscenities, yelling " fire" in a crowded theater, and racial insults are maximally communicative: they create a very direct contact between minds. Communication of this sort is as aggressive as physical violence and, like other forms of violence, such speech is often legally restricted. Legal regulation of speech is thus directed at the communicative as opposed to the representational dimension of language.

The most subtle and far-reaching analysis of the communicative dimension of linguistic meaning is that of H. P. Grice. [12] He draws our attention to a manifest difference of meaning illustrated in the following contrasting pairs:

(IA) Herod presents Salome with the head of St. John the Baptist on a charger.
(lB) Herod says to Salome, " He's dead."
(2A) I leave the china my daughter has broken lying around for my wife to see.
(2B) I say to my wife," Our daughter has broken the china."
(3A) A policeman stops a car by standing in its way.
(3B) A policeman stops a car by waving.

All of these are examples of communication and the difference between the *A* cases and the *B* cases is subtle. Contrast the above pairs with these illustrations of representation in John Poinsot's *Treatise on Signs:*

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[11] On the importance of " contact of minds " in rhetoric, see Ch. Perelman and L. Olbrechts-Tyteca, *The New Rhetoric* [1958] (Notre Dame: University of Notre Dame Press, 1969), pp. 14-18.

[12] H. P. Grice, "Meaning," *Philosophical Review* 66 (1957), pp. 377-388. I have made use of David Lewis's cogent exposition of Grice's classic article from his book *Convention* (Cambridge: Harvard University Press, 1969), pp. 152-154.

(1) I see smoke, so I believe there is a fire.
(2) I see napkins on the table, so I believe that dinner is imminent.

All of both Grice's and Poinsot's examples involve significa-
tion: in every case, a sign signifies an object to a cognitive power;
in every case, a sign means something in the sense that it has a
tendency to produce a belief in the mind of an audience. But
Grice's examples are communicative in the sense that *A* means
something by his use of sign or. Poinsot's examples are merely
representational; his signs mean something, but no one means
anything by them. [13] Turning to Grice's examples, they all have
the feature that not only does someone do some action that pro-
duces a belief in the mind of the audience, but also someone in-
tends-expects and wants-to produce that response by his ac-
tion; moreover, in all Grice's examples, someone intends that the
audience should recognize his intention to produce that response
by his action. Indeed, the *differentia specifica* of Grice's *B* ex-
amples is so subtle that there is still controversy about how to
capture it. Grice's own formulation seems to apply to both the
A and the *B* examples : " *A* uttered [or did] or with the intention
of inducing a belief by means of the recogntiion of this inten-
tion." [14]

[13] Poinsot's first example is what he calls a *signum naturale;* his second
example is what he calls a *signum e% consuetudine (Tractatus de Signis,* p.
27/20-30). It is possible that placing napkins on a table could be intentional-
ly meant to call people to dinner, in which case it would become a communi-
cative sign. Whereas Poinsot has three divisions of signs : natural, customary,
and stipulated; Grice has only two divisions of meaning, natural and non-
natural. See his "Meaning," p. 379.

[14] Grice, "Meaning," p. 384. In Strawson's (1964) reformation of Grice,
for *S* to mean something by % he must intend :
(a) S's utterance of% to produce a certain responser in a certain audience *A;*
(b) *A* to recognize S's intention (a);
(c) A's recognition of S's intention (a) to function as at least part of *A's*
    reason for *A's* responser.
See Andrei Marmor, *Interpretation and Legal Theory* (Oxford: Clarendon
Press, 1992), p. 25. Again, even this subtle reformulation does not seem to
capture the difference between our *A* and *B* examples. Grice himself offers
several alternative refinements of his analysis in his subsequent article,
"Utterer's Meaning and Intentions," *Philosophical Review* 78 (1969), pp. 147-
177.

Grice's decisive insight was that distinctively human com-
munication involves a reciprocal (and reflexive) recognition of
intentions. Communication is not a transitive action whereby
an agent creates a belief in his audience the way a carpenter im-
poses form on raw material; nor is communication the sum total
of two acts : the transmission of the encoded message combined
with the interpretation of the received message. Rather com-
munication is a genuine meeting of minds, a community of in-
tention, a shared project of meaning. When I speak to you, I
signal first of all that I desire your attention; I then want you to
recognize that I desire to share an intentional state (a belief, pur-
pose, fear) ; I also expect that your recognition of my desire to
share my intentional state will enable you to understand my be-
lief, purpose, or fear.

Why should your recognition of my desire to share an inten-
tional state play a role in your understanding of what I say? Be-
cause the meaning of my utterance will be underdetermined by
the semantic rules of interpretation. I may mean the opposite of
what I say, as in sarcasm; I may mean more than I say, as in
conversational implicature; what I mean may have no relation to
what I say, as when I point out that it is raining to console your
grief. But if I can engage your powers of empathetic intuition,
if I can get you to imagine what you would say if you were in
my position, then I will greatly reduce the risk of misunderstand-
ing. Communication is the effort to share a common point of
view; and its success depends upon the imaginative power of the
listener to recreate a speaker's beliefs and desires.

Grice's project is to reduce the semantic representation of lin-
guistic meaning to the communication intentions of speakers. In-
stead of admitting a discrepancy or even a distinction between
speaker's meaning and utterance meaning, Grice insists that the
utterance meaning is reducible to the communication intentions
of speakers. Grice has been attacked by John Searle and others
for reducing the public, conventional system of semantic rules to

the private, idiosyncratic intentions of individuals. 15 Of course, if our intentional states ar-; themselves linguistically shaped, then Grice's alleged reduction of semantic representation to communicative intentions could rest upon a prior incorporation of semantic conventions into intentions. 16 David Lewis argues that it is precisely these semantic conventions that differentiate Grice's *B* examples from his *A* examples. In the *B* examples, but not the *A* examples, the audience's response is produced by means of signs given in conformity to a semantic system. True, the role of these semantic conventions is itself intended by the speaker; while I can stop your car by standing in front of it, it is more efficientnot to mention safer-to wave.17 If I intend my communication intentions to be effective, I will probably intend them to conform to a public system of semantic conventions. Thus, among my communication intentions is an intention to represent a state of affairs in conformity with a certain semantic system (gesture, English, semaphore), an intentiqn that you recognize this intention to represent, and an intention that by that recognition you will correctly interpret my representational intention.

3) The Representational Dimension of Language

All of which brings us back to the semiotic of John Poinsot and the representational dimension of language. Language has

15 " Meaning is more than a matter of intention, it is also at least sometimes a matter of convention. One might say that on Grice's account it would seem that any sentence can be uttered with any meaning whatever, given the circumstances make possible the appropriate intentions. But that has the consequence that the meaning of the sentence then becomes just another circumstance." Searle, *Speech Acts,* p. 45.

16 Grice gives us no theory of intentionality, but he seems to slip semantic conventions into his communication intentions when he says : " An utterer is held to intend to convey what is normally conveyed (or normally intended to be conveyed), and we require a good reason for accepting that a particular use diverges from the general usage." Grice, "Meaning," p. 387.

17 Lewis defines the *differentia* of the *B* examples thus: "He intends the audience's recognition of his intention to produce that response to be effective in producing that response." Lewis assumes that communication is much more effective when it relies on a public system of semantic rules; and indeed, in general the *A* examples invite misunderstanding more readily than do the *B* examples. David Lewis, *Convention,* p. 154.

two irreducible elements: the representational and the communicative. We have seen that Grice's attempt to reduce the semantics of representation to the intentions of communication fails. Here we will discover that representation is not just irreducible but logically prior to communication in the analysis of language. The semiotic of John Poinsot is the most general and fundamental science of signs because what all signs share is the office of representation; only a small subset of signs are used to communicate.

The pure or limiting case of communication, as we have seen, would be telepathy: here we share our point of view directly, unmediated by signs. Pure communication is thus unsemiotic. Curiously, the pure or limiting case of representation is simply the relation of an object to a cognitive power: pure representation would also be unsemiotic.[18] Communication assumes the point of view of the speaker who initiates contact; thus although successful communication depends upon the " uptake " of the audience, that uptake is itself intended by the speaker. Representation assumes the point of view of the listener who must interpret what is said. The semiotic of John Poinsot is thoroughly embedded in the cognitive point of view of the listener, for most signs have meaning even though nothing is meant by them.

Poinsot defines the formal rationale of the sign in terms of its relation to an object; he points out, however, that a relation to a cognitive power is presupposed.[19] Moreover, Poinsot is unsatisfied with the analysis of signification into the two dyadic relations of sign-object and sign-mind; he therefore suggests that we define the formal rationale of the sign in terms of a single triadic

[18] By " unsemiotic," I mean that the limiting cases of both communication and representation make use of no instrumental signs. Each and every act of cognition, however, involves formal signs.

[19] Poinsot claims in several places that the formal rationale of the sign consists in the ontological relation of sign to object, not in the transcendental relation of sign to mind. See *Tractatus de Signis,* p. 119/13; p. 128/14; p. 159/16; p. 141/12. Yet in other places Poinsot says that relation to a cognitive power, though not constitutive, is presupposed in the formal rationale of the sign (pp. 160/10 and 140/22).

relation encompassing sign, object, and mind.[20] Indeed, there is no way to describe the sign-object relation without referring to the sign-mind relation; no genuinely triadic relation can be reduced to the sum of its dyads.[21]

Even if the sign-object relation is first in the order of being, the sign-mind relation is first in the order of Poinsot's exposition to us. For signification is a special kind of representation and representation is a special kind of cognition-meaning that signification is itself a special kind of cognition. To make cognizant, says Poinsot, is said of every cause concurring in the production of knowledge. Now something is made cognizant in four ways, namely, effectively, objectively, formally, and instrumentally. In contemporary jargon, we could define these four factors as necessary and/or sufficient conditions for cognition. Effectively, the mind produces knowledge by its own dispositions and acts; for example, our will directs our attention to the object of cognition or calls to mind the principles of inductive reasoning. Objectively, the thing known produces knowledge by presenting itself to the mind as an object of cognition; for example, a part of any perceptual experience is the belief that an object is causing my perception. Formally, the concept I form of an object or class of objects produces knowledge by being more perspicuous than that of which it is the concept. Instrumentally, the vehicle bearing the object to the mind is a cause of knowledge; for example, a picture of the emperor conveys the emperor to the mind, and this vehicle we call the instrument of cognition.

Representation is a special kind of cognition. To represent is

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[20] Poinsot, *Tractatus de Signis,* p. 154/20-30. We will see below (p. xxx) that this point is crucial to Poinsot's solution to the problem of how words apply to physically real objects.

[21] "And it cannot be said that a sign is something relative to a significate and not to a power, but only terminates a power. For that a sign is referred to a significate is unintelligible, if the sign is unconnected with a cognitive power and conceived without any order thereto, because a sign, insofar as it respects a significate, brings and presents that significate to a cognitive power." Poinsot, *Tractatus de Signis,* p. 156/10-17.

said of each factor which makes anything become present to the mind. What this means is that the effective causes of knowledge, namely, the dispositions and acts of the mind, are excluded : the dispositions and acts of the mind cannot make anything become present to the mind because they are the mind. So to represent is said in three ways, namely, objectively, formally, and instrumentally. For an object, such as a wall, represents itself objectively; a concept represents formally; and a footprint is the instrumental vehicle of representation.

Finally, signification is a special kind of representation. To signify is said of that by which something distinct from itself becomes present, and so is said in only two ways, namely, formally and instrumentally. For every object represents itself, but a sign must represent something other than itself. In the case of an instrumental sign, such as a word, the sign-vehicle must be cognized before the sign can make its object present to the mind; in the case of a formal sign, such as a percept, image, or concept, the sign directs the mind to its object without any sign-vehicle being cognized.

Thus Poinsot's fundamental division of signs into formal and instrumental is the product of a comprehensive theory of cognition. Insofar as signs are ordered to a cognitive power they are divided into formal and instrumental. In addition to this cognitive component, Poinsot' representational semiotics also has a semantic component, namely, a theory of the relation of signs to their objects. We will explore this semantic component in detail when we turn to the linguistic sign; here we will only note that, insofar as signs are ordered to something signified, they are divided into natural, customary, and stipulated. A natural sign, like a symptom, is related to what it signifies by the laws of nature; a customary sign, like a name on a mailbox signifying the owner of the house, is related to what it signifies by tacit social conventions; and a stipulated sign, like a traffic sign or a neologism, is deliberately instituted by some authority. So Poinsot's

general definition of a sign is : " That which represents something other than itself to a cognitive power." [22]

Poinsot's view that something may represent itself or something else, whereas something cannot signify itself, corresponds with the meanings of these words in Latin as well as in English. To represent (*repraesenifare*) originally meant to make present, to manifest, to exhibit; later, it came to mean to supply the place of, to portray, to signify. A person may represent himself in court or he may be represented by an attorney. Similarly, representation originally meant the presence, bearing, or appearance of a thing but later also came to mean signification. Any object in cognition may be said to represent itself in the sense that it stimulates a cognitive power, but it seems odd to speak of an object signifying itself. Now the two meanings of "to represent" are connected in the sense that often the only or the most effective way to make something present is to signify it. To signify (*significare*) means precisely to show by signs, that is, to represent something other than itself. Thus the distinctive sense of representation, in contrast to signification, is this sense of manifesting, of making present.

Because something can represent itself, to describe percepts and concepts as representations is to invite skepticism-the very term suggests that there is nothing behind them. Then to go further and describe these representations as mental objects is to turn an invitation into a summons. Yet such is the story of the classic rationalist and empiricist theories of knowledge. If what we know are representations, and if representational objects can represent themselves to mind, how can we know anything beyond them? Indeed, since mental representations are inherently private, the representational theory of knowledge seems to lead to a radical solipsism.

Poinsot's treatment of concepts and percepts as signs avoids these skeptical pitfalls. For, unlike instrumental signs, which

[22] I have paraphrased, for purposes of exposition, Poinsot's summary definition and division of the sign. See *Tractatus de Signis,* p. 26/21-27/12 and p. 25/11-12.

must be first cognized as objects before they may function as
signs, the formal signs of percepts and concepts are not objects
at all but merely modes of cognition. A formal sign is not that
which we know but that by which we know. Because allowing
for any mediation between mind and object invites skepticism-
whether we call that mediation a sign or a representation-
Poinsot insists that formal signs do not mediate the relation of
object to mind. He says that "something is said to be known
equally immediately when it is known in itself and when it is
known by means of a concept or awareness; for a concept does
not make cognition mediate." [23] Poinsot appeals to our own ex-
perience: he says that no one first sees a concept or percept so
that through it he may see an object; grasping an object through
a formal sign " does not constitute a mediate cognition, because
it does not double the object known nor the cognition." [24] The
intentional object of knowledge is seen in the concept and not out-
side of it.

   The representational theory of knowledge is founded upon a
false analogy between formal and instrumental signs. We have
good reason to believe that instrumental signs genuinely represent
their objects because we often have an opportunity to compare
sign to object. We can compare the footprint to the animal, the
picture to the person, the map to the terrain; smoke leads us to
fire, clouds lead to rain, words effectively convey concepts. But
in the case of formal signs no such direct comparisons are pos-
sible; since cognition can, on this theory, only reach representa-
tional objects, there is no way to compare them to the objects
they purport to represent. [25] Indeed, since something may repre-
sent itself, there is no contradiction in asserting that representa-
tions have no real objects. But if instrumental and formal signs

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   [23] Poinsot, *Tractatus de Signis,* pp. 223/27-224/2.

   [24] Poinsot, *Tractatus de Signis,* p. 224/32-34.

   [25] " The main difficulty with a representative theory of perception is that the
notion of resemblance between the things we perceive, the sense data, and the
thing that the sense data represent, the material object, must be unintelligible
since the object term is by definition inaccessible to the senses." John Searle,
Intentional-ity (Cambridge: Cambridge University Press, 1983), p. 59.

play such different roles in cognition, how can Poinsot maintain that: " The division into formal and instrumental signs is essential, univocal, and adequate "? Poinsot reminds us that the formal rationale of the sign concerns the ontological relation of sign to object, not the transcendental relation of sign to mind. Formal signs have a relation to their objects founded upon the natural laws of cognition just as natural instrumental signs have a relation to their objects founded upon natural laws of cause and effect.[26] Formal and instrumental signs differ in the relation of sign to mind, in the mode of representation to a cognitive power, not in the mode of signification.[27]

How do linguistic signs fit into this cognitive model of signification? What is a linguistic sign on Poinsot's account? Poinsot's analysis of signs, like that of modern semantics, is resolutely, though not exclusively, oriented toward the point of view of the interpreter. The question is virtually always: "What does a sign mean? " instead of " What did the speaker mean by a sign?" This semantic orientation determines what counts as a linguistic sign-the unit of analysis. Poinsot's semiotic is a branch of material logic, which is the study of the units or components of logical reasoning, both syllogistic and dialectic. The simplest component of logical reasoning is the term, followed by the proposition, which is followed by systems of discursive inferences. Poinsot explicitly incorporates the term as the basic element of material logic into his theory of signs ; he defines a term as: "A sign out of which a simple proposition is constructed."[28] Thus, following Aristotle's example in the *Perihermenias,* Poinsot develops this theory of the linguistic sign as part of the foundations of logic. The philosophy of language is embedded in the philosophy of logic: as we shall see, Poinsot's

[26] How this statement holds even in cases where the object lacks physical existence has been examined in detail by John Deely, " Reference to the Non-Existent," *The Thomist 3912* (April 1975), pp. 253-308.

[21] Poinsot, *Tractatus de Signis,* p. 229/1-3, 145/10-28 and 238/28-45.

[28] Poinsot, *Tractatus de Signis,* p. 24/10-13. A proposition itself is a sign of truth or falsity; see Poinsot, *Ars Logica* [1632], vol. 1 of the *Cursus Philosophicus Thomisticus,* pp. 23-24.

principal discussion of semantics is found in the fifth article of
the first question of the Second Part of the *Ars Logica, "De
Termino."* [29]

What, according to Poinsot, is a term and how is it related
to a word? The first division of terms is into mental, vocal, and
written : the mental term is a concept which signifies by a natural
similitude, the vocal and written terms signify by stipulation *(ad
placitum)* .[30] Now a mental term creates problems for both the
theory of logic and the theory of language because a concept is
neither an instrument of logic nor a linguistic unit. [31] All in-
struments of logic must have a stipulated meaning, which rules
out mental terms, nonsense expressions, and onomatopoeic
words. [32] Therefore, in his attempt to capture only linguistic units
with a stipulated meaning, Poinsot relies on the standard Latin
translation of Aristotle's definition of a name or noun (*onioma),
phone semantike kata syntheken,* which is *vox significativa ad
placitum.* [88] Unfortunately, a *vo:i:* like a *phone* is simply a voicing
of any length; usually Aristotle and Poinsot simply mean a word,
but sometmies they mean other kinds of utterances. [34] Moreover,
a *vo:i:* is a vocal expression, whereas Poinsot needs to capture
both vocal and written expressions. [35]

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[29] " *Utrum Voces Significent Per Prius Conceptus An Res," Ars Logica,*
pp. 104b 29-108a 33, included in the Deely edition of the *Tractatus de Signis*
as Appendix A, " Whether Vocal Expressions Primarily Signify Concepts or
Things," pp. 344-351.

[30] Poinsot, *Ars Logica,* p. lOa 34 and p. 109b 45.

[31] Indeed, sometimes Poinsot defines terms in a way that seems to exclude
mental terms: *"Terminus   autem oratio quaedam artificialia sunt   ..•" Ars
Logica,* p. lllα 28.

[32] *"De essentiali ratione termini logicalis seu artificialis est, quod sit sig-
nificativus significatione ad placitum, si sit vocalis vel scriptus, non si sit con-
ceptus."* Poinsot goes on to rule out the *voces* that signify naturally, as in
Plato's *Cratylus.* See *Ars Logica,* p. 90b 12-35.

[33] For Aristotle's *phone semantike,* see *De Interpretatione* 16a 19.

[34] " *Oratio est vox significativa ad placitum ...* " Poinsot, *Ars Logica,* p.
17a 7.

[35] Deely often translates *vox* as "voice," sometimes in contexts where *vox*
is simply short for *vox significativa,* and a *vox significativa,* which Deely
translates as " linguistic expression," often means simply "word." Thus in

Thus, in one way *voces* are a subset of *termini,* since they exclude mental terms; in another way, however, *termini* are a subset of *voces,* since not all significant words are elements of logical propositions-and terms are defined by their relation to propositions. [36] In one place, Poinsot .says that all terms are nouns, verbs, or adverbs; and indeed all of his examples of terms or the descriptive words that form the subject or predicate of propositions, such as rock, Peter, man, animal. [37] Unlike many Scholastic logicians, however, Poinsot did not restrict the domain of terms to categorematic signs but included syncategorematic signs, such as logical operators. [38] Still, there are many words that are neither categorematic nor syncategorematic-meaning that Poinsot's theory of the linguistic sign is tantamount to a theory of the logical term.

Since the formal rationale of a sign consists in its relation to a significate, we must ask: what is the relation of a linguistic sign to its object? Although Aristotle had said that words get their meaning by convention or social contract (*kata syntheken),* Poinsot insists that words get their meaning by the deliberate stipulation of public authority. [39] When the public or legal imposition of meaning is forgotten, words signify from customary usage. [40] Now, according to the Scholastic maxim, the word signifies its object through concepts: *"vo:c significat rem mediantibus conceptibus."* But a concept, or a formal sign, is a natural sign because it signifies its object by a natural similitude. What

the title of the fifth article of the first question *De Termino, "Utrum voces significent per prius conceptus an res;' voces* is best rendered as "words." I will render *vo:r* as word whenever the context calls for it.

[36] " *Ratio est, qufo essentia actualis termini est esse partem propositionis* ... " Poinsot, *Ars Logica,* p. 97b 26.

[37] Poinsot, *Ars Logica,* 8b 23.

[ss] Categorematic terms signify directly; syncategorematic terms signify indirectly. *"Categorematicus est, qui aliquid per se significat.* ... *Terminus syncategorematicus est, qui aliqualiter significat, ut adverbium velociter, faciliter, signum omnis, quidam, etc."* Poinsot, *Ars Logica,* lib 47-12a 10.

[39] For Aristotle, see *De Interpretatione* 16a 19; for Poinsot: *"Signum ad placitum, quad repraesentat aliquid e:r impositione voluntatis per publicam auctoritatem, ut vo:r homo." Tractatus de Signis,* p. 27/22-25.

[40] Poinsot, *Tractatus de Signis,* p. 283/9-22.

this means is that words seem to signify through a compound of two relations of signification: first the word " man " signifies the concept man and then the concept man signifies the real man.

One shortcoming of such a double relation of signification is that it makes all concepts into reflexive concepts. If the word " man " first signified the concept man, then the concept man would be the object of the sign "man"; but a concept is an object only when it is a reflexive concept. There is nothing wrong with using the word " man " to refer to the concept man, but then cognition terminates at the concept and cannot reach the real man.[41] We can either talk about the concept man by treating the concept as an object, or we can talk about the real objective man. Moreover, it is logically paradoxical to turn all concepts into reflexive concepts since reflexive concepts are parasitical on direct concepts. A reflexive concept can become an object of cognition only on the pattern *(ad instar)* of a real object reached by a direct concept.[42] Thus, there must be a way for the word man to reach the real man-by way of the direct concept of man-in a single relation of signification.

Actually, for Poinsot, since every instrumental sign signifies its object by means of concepts, the intrinsic unity of the sign relation is threatened for every instrumental sign. Unfortunately, Poinsot analyzes the interplay of instrumental and formal signs only in the case of linguistic signs.[43] But what are we to make

[41] " Consequently the thing signified by means of the direct concept is not represented there [i.e., in the reflexive concept] except very remotely and indirectly. And the reason is that in a reflexive concept the very thing signified [by a direct concept] functions as the terminus-from-which reflexion begins; therefore a reflexive concept does not represent that thing as its object and as the terminus-to-which the representation is borne. . . ." Poinsot, *Tractatus de Signis,* p. 329/10-18.

[42] "the whole rationale of reflexion springs from this, that our understanding and its act are not objectively understandable in this life except dependently upon sensible things, and thus our concepts, even though they are formally present, are nevertheless not present objectively as long as they are not formed on the pattern *(ad instar)* of a definable sensible structure or ' essence,' which can only come about by means of a turning back or ' reflexion ' undertaken from a sensible object." Poinsot, *Tractatus de Signis,* p. 325/23-32.

[43] See Poinsot, *Tractatus de Signis,* pp. 334-351.

of smoke as a sign of fire? Does seeing smoke signify the concept smoke or the concept fire? Does the concept fire then signify real fire? These notions of double sign relations, or chains of sign relations, strike us as counter-intuitive. The word "man" seems to reach all the way to the real man, just as the sight of smoke seems to reach all the way to real fire.

In his analysis of the linguistic sign, Poinsot indeed rejects the idea of double sign relations. He first distinguishes between ultimate and non-ultimate concepts. Ultimate concepts are concepts of objects; non-ultimate concepts are concepts of words. In order to unify the linguistic sign relation, says Poinsot, we must hold that the real object of the ultimate concept is represented in the non-ultimate concept. In other words, the linguistic concept is itself a compound of an ultimate concept and a non-ultimate concept. For when we hear the word "man" cognition does not cease when we reach the concept man but proceeds directly to the real man. Put more forcefully, we cannot have a non-ultimate concept of a word unless we first have an ultimate concept of the object of that word. A word is not a concept at all unless we grasp its terminal object.

In one of his few vivid examples, Poinsot considers the case of a peasant who, not knowing Latin, hears the word "animal." If there were a double relation in the linguistic sign, if the concept of the word did not presuppose the concept of the object, then the peasant could form a non-ultimate concept of the word " animal " without knowing what the ultimate concept animal signified. But this is impossible. Either the peasant knows that the sound pattern of " animal " is a word or he does not. If he knows it is a word, then he can form a vague non-ultimate concept of it because he knows that it ultimately signifies a word. If he does not think it is a word, but just a meaningless sound, then he cannot form a non-ultimate concept but he will form an ultimate concept-the wrong ultimate concept but an ultimate concept nonetheless. In either case, it remains true that there can

be no concept of a word without a concept of its object; the con-
cept of the real object is represented in the concept of the word. [44]

   In quite a different context *(Ars Logica,* 1, p. q. 1, *"De
Termino,"* art. 5), Poinsot considers the question: " Whether
words primarily signify concepts or things." Poinsot's discussion
of language in this article takes a surprisingly pragmatic turn.
His emphasis on language as an instrument of communication,
rather than as a semantic system of representations, is somewhat
startling. For if, as he suggests, language is an instrument for
serving human needs, then it makes sense to say that words must
primarily signify things, for it is with things (including other
human beings) ultimately that human beings must contend. And
indeed, Poinsot concludes that words primarily signify real ob-
jects, unless, as in the case of reflexive concepts and concepts of
second intentions, the object signified is itself a concept. [45]

   Thus, Poinsot explicitly rejects the double signification theory
of words and insists that " words signify things and concepts by
one single signification." [46] How is it that words can signify both
concepts and things within one relation of signification? Because
the linguistic sign has a two-fold office: " namely, to substitute
for the things which the word manifests, and second, to substitute
for the concepts which signify those very things in a hidden and
interior way." [47] Poinsot argues for a transitivity of ministerial
office in the linguistic sign: the concept ministers to the object
(as its intentional similitude) by making it more perspicuous to
cognition while at the same time the word ministers to the con-
cept by rendering it sensible; thus if the word ministers to the
concept and the concept ministers to the object, then the word
primarily ministers to the object. He draws a political analogy
that I will elaborate : if a prime minister serves the king and a
cabinet minister serves the prime minister, then, by transitivity.
the cabinet minister primarily serves the king. [48] This translates

[44] See Poinsot, *Tractatus de Signis,* pp. 336/7-337/30.

[45] Poinsot, *Tractatus de Signis,* p. 349/36-41.

[46] Poinsot, *Tractatus de Signis,* p. 345/8-9.

[47] Poinsot, *Tractatus de Signis,* p. 346/37-40.

[48] See Poinsot, *Tractatus de Signis,* p. 346/45-48.

into a transitivity of signification: the concept signifies the object, the word signifies primarily the object. [49]

Poinsot deftly unites the pragmatic and the semantic dimension of the linguistic sign by distinguishing two kinds of intentionality. Earlier in the *Tractatus de Signis,* Poinsot distinguished two senses of " intention " : the act of will directed toward an end (pragmatic intention) and the act or concept of the understanding directed toward its object (for a linguistic act or concept, a semantic intention). [50] In this article, he brings both of these senses of intention to bear on the question at hand. He argues that men originally wanted to signify things and in order to effect this pragmatic intention they imposed a semantic intention toward things on to words. In short, that words intend real objects is quite intentional. [51] John Searle's theory of language is based on the same pun on intentionality: " The main function which language derives from Intentionality is, obviously, its capacity to represent. Entities which are not intrinsically Intentional can be made Intentional by, so to speak, intentionally decreeing them to be so." [52]

In this pragmatic vein, Poinsot also briefly considers language from the point of view of the speaker-a point of view typically neglected by semantics. One objection Poinsot considers to his view that words are mediated by concepts is the argument that words cannot be mediated by the concepts of the speaker, because

[49] " The reason is that the concept itself is ordered ultimately and principally to representing the thing itself of which it is the intentional similitude. Therefore, an outward expression, which is only an instrument of the concept itself in representing and which renders the concept itself sensible, will be ordered more principally to representing those same things, because it is for this very task that it serves the concept." Poinsot, *Tractatus de Signis,* pp. 349/ 42-350/2.

[50] Poinsot, *Tractatus de Signis,* p. 58/14-20.

[51] ". . for men first wished in general, as it were, to signify things, and then sought a way by which they could signify them by means of a stipulation of vocal sounds." Poinsot, *Tractatus de Signis,* p. 346/21-24.

[52] Searle, *Intentionality,* p. 175. Also, ". . . language relates to reality in virtue of the fact that speakers so relate it in the performance of linguistic acts" (p. 197).

" if words are formed by the air or by someone sleeping, they still signify." [53] Put in contemporary jargon, this objector is claiming that words and propositions have a literal meaning even if nothing is meant by them. Searle insists, by contrast, that no phenomenon can be recognized as linguistic except on the assumption that it was produced for a purpose-that, in short, the speaker meant something by it.[54] Searle even takes up the question, like Poinsot's objector, of words formed by the wind; Searle, though, excludes these sounds from the domain of linguistic phenomena along with, presumably, the words of someone sleeping or, say, sentences produced randomly by a computer.[55]

Poinsot seems to agree with Searle against the semanticists : "When voices (*voces*) are formed by a non-speaker, those voices *(voe es)* are not speech (*locutio*), but physical sound resembling speech; whence they do not signify from imposition, but from the custom which we have when we hear similar words (*voces*), because the voices (*illae* [*voces*]) in question are similar to the words (*voces*) which are speech." [56] Here Poinsot reveals the strongly pragmatic dimension of his doctrine of the stipulated sign (*signum ad placitum*). Poinsot claims that all words have their meanings imposed by public authority; the public authority then deputizes all members of the linguistic community by giving them the right to re-impose the original stipulation of meaning in

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[53] Poinsot, *Tractatus de Signis,* p. 347/21-22.

[54] " When I take a noise or a mark on a piece of paper to be an instance of linguistic communication, as a message, one of the things I must assume is that the noise or mark was produced by a being or beings more or less like myself and produced with certain kinds of intentions." Searle, *Speech Acts,* p. 16.

[55] " If I regard the noise or mark as a natural phenomenon like the wind in the trees or a stain on the paper, I exclude it from the class of linguistic communication, even though the noise or mark may be indistinguishable from spoken or written words." Searle, *Speech Acts,* p. 16. Note that Searle speaks of the " class of linguistic *communication"* as opposed to the class of linguistic representations. Accidental words do not communicate but they might represent.

[56] Poinsot, *Tractat11sde Signis,* p. 349/14-20.

the use of the word as an instrument of communication.   Apparently, persons cannot use a word in speech unless they deliberately rehearse the original stipulation of meaning; thus Poinsot insists that words spoken in one's sleep are not linguistic on the grounds that the speaker did not deliberately impose the meaning. Poinsot does not argue that literal meaning can be reduced to the arbitrary impositions of the speaker; rather he argues that to count as speech a word must have the correct literal meaning deliberately imposed by the speaker.

Interestingly, Poinsot claims that such accidental or random speech is not simply non-linguistic but that it is similar or analogous to language. Thus, when we hear someone talking in his sleep, we customarily interpret those sounds after the pattern (ad *instar)* or by analogy with someone deliberately speaking. In short, even where there is no deliberate intention on the part of the speaker, one must interpret all speech as if there were such an intention. 58

A final aspect of Poinsot's account of the communicative, as opposed to the representational, dimension of language concerns the question of whether signification involves efficient causality. One reason signification seems to involve efficient causation is that the physical energy transmitted by the sound waves of speech directly arouse the attention of the listener. Therefore, since speech physically impinges on the senses and mind of the listener, signification must involve efficient causation. Poinsot denies that signification involves efficient causation on the grounds that the energy of vocalized sound waves serves to arouse the attention

57 " **---** words signify from the concept of the one imposing [i.e., of the one who first coined the word] as from the source whence they get signification and imposition, but they signify the concept of the speaker as that for which they are surrogated; for it is to this end that expressions are imposed or coined, that they might be surrogated [i.e., put to use] by anyone speaking." Poinsot, *Tractatus de Signis,* p. 349/7-14.

58 Using Searle's terms, why could not the words of a parrot, of a sleeping person, of a random computer program, have meaning as words but not as speech acts? Or, in Poinsot's terms, why not concede that such utterances are words *(voees)* but not speech *(locutio)* ?

of the listener but not to effect the signification. The physical energy of the sound waves opens a channel of communication by capturing the attention of the listener, but the sound waves are not themselves the linguistic representations of speech. In short, the physical energy of sound may bring about a communion of minds, by providing a forum or channel for communication, **but** the signification of language is not caused by the sound waves.[59] Put in terms of modern causal analysis, sound waves are neither necessary nor sufficient conditions for linguistic representation. Not necessary, because linguistic meaning can be conveyed visually or tactilely; not sufficient, because sound waves mean nothing apart from our knowledge of the language.

Although, as we have often noted, Poinsot's semiotics is thoroughly representational in character, he does take note of some of the communicative aspects of language. I have tried to emphasize (and perhaps exaggerate) the difference between communication and representation because they are often conflated –as in the claim that meaning can be captured by communication intentions alone. It is easy to see why they are conflated: typically, when we make a statement we intend both to represent some state of affairs and to communicate this representation to some audience. Things closely correlated are often difficult to disentangle and the intention to represent is highly correlated **with** the intention to communicate.

John Searle argues that within linguistic behavior representing intentions are logically prior to communicating intentions. What this means is that one can use language to represent something without intending to communicate. " Communicating is a matter of producing certain effects on one's hearers, but one can intend to represent something without caring at all about the effects on

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[59] " --- the excitative energy in a person's voice is not the actual signification itself or the signifying of the voice." Poinsot, *Tractatus de Signis,* p. 198/13-14. True, the energy of the sound waves, even in a language I do not understand, signifies the intention of the speaker to communicate. But even here the significance is not caused by the sound waves but by the conventions of addressing an audience.

one's hearers.   One can make a statement without intending to
produce conviction or belief in one's hearers or without intend-
ing to get them to believe that the speaker believes what he says
or indeed without even intending to get them to understand at
all." Searle does not provide examples of such non-communica-
tive representation but several come to mind. The internal dis-
course of thought is representational but not communicative; re-
citing paradigms of Latin conjugations or, in general, all mne-
monic utterances are solely representational; many comic, face-
tious, and other non-serious utterances lack any intention to com-
municate; talking or singing to oneself seems to be non-com-
municative.

Yet it seems impossible to intend to communicate without in-
tending to represent-though Mussolini's view that a punch is
the characteristic fascist form of communication comes close. As
Searle says: "I cannot, for example, intend to inform you that it
is raining without intending that my utterance represent, truly
or falsely, the state of affairs of the weather." [60] In order to
communicate, then, I must represent.

John Poinsot, following Thomas Aquinas, compares the rela-
tion of the communicative to the representational dimensions of
language to that of the sacraments.   For the sacraments both
represent and communicate grace. God uses the sanctifying mo-
tion of the sacraments as the physical energy to capture the at-
tention of the " communicant " and open the channel for the com-
munication of grace; however, this energetic motion is utterly
distinct from the signification itself of the sacraments.   This
energy is meant only to help us to attend to what the sacraments
signify and to be moved by that signification. [61] Thomas Aquinas

so Searle, *Intentionality,* pp. 165-166.

61 ". • • the sacraments are as it were a kind of sign and words of God
exciting us to grace and producing grace. But this energy is utterly distinct
from the signification itself of the sacraments, for it is superadded to that
signification in the same way that the use and excitative energy of speech is
superadded to the signification of words. For excitation occurs to this end,
that we attend to the signification and be moved by that signification." Poinsot,
Tractatus de Signis, p. 198/30-38.

and his disciple John Poinsot were right to see a parallel be-
tween language and the sacraments. The sacraments cannot com-
municate grace unless they represent it; conversely, the sacra-
ments can represent grace without communicating it. In other
words, *to* serve as an instrument of grace a sacrament must first
be a sign of grace. So, too, words cannot be used to communicate
unless they represent something; words are instruments only to
the extent that they are signs.

THE SUBSTANTIAL UNITY OF MATERIAL SUBSTANCES ACCORDING TO JOHN POINSOT

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E VERY SUBSTANCE metaphysician must answer several difficult questions peculiar to his or her ontology. In this paper I will examine John Poinsot's answer to two of these questions, one concerning the nature of the form of substantial composites, and one concerning which material objects are substantial composites. I shall argue that Poinsot's answers to these questions show the untenability of a structuralist view of substantial form and of a reductive materialist view of living beings. But before considering these questions I must briefly outline Poinsot's view of what the general nature of substance is, as explained in his treatise on material logic.[1]

Poinsot's Account of Substance in General

In the section of his *Material Logic* concerned with the categories Poinsot gives a succinct account of the nature of substance

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[1] *Cursus Philosophicus thomisticus;* vol. I, *Ars logicae prima et secunda pars,* ed. P. Beato Reiser (Turin, Italy: Marietti, 1820), Q. XV, pp. 523-527. It should be noted that I am not concerned in this paper with describing either the psychological origin of the notion of substance, or of justifying it against phenomenalism. My only aim is to show how such a view of substance leads to a certain notion of form when it is applied, so to speak, to material objects. For an interesting account of the origin of the concept of substance in Poinsot see John Deely, *Tractatus De Signis: The Semiotic of John Poinsot* (Los Angeles, Berkeley, and London: The University of California Press, 1985), p. 86, n. 16. Deely takes it that Poinsot has a deeper categorial scheme than that of Aristotle from which the latter's scheme "emerges," as it were. In this article, then, I am not concerned with that deeper scheme which Deely refers to in this interesting note.

in general and of its relation to the supposit and to the act of existing. He notes that by " substance " narrowly considered is meant that kind of essence to "which it is due to exist in itself as opposed to that kind to which it is due to exist in another" (i.e., an accident). 2 He defends this as the primary " definition " 3 of substance against the other definition of it which is " that which stands under accidents," on the grounds that a thing must exist in itself, at least ontologically speaking, before it can support accidents 4 and that to define substance as that which supports accidents is to define it in relation to other things, not itself. This point is important because many modern and contemporary philosophers who have attacked the notion of substance have done so by arguing that there are no beings which stand under accidents. For Poinsot this attack, even if successful, would show that there are no accidents, not that there are no substances.

Poinsot insists that " substance " connotes a quiddity to which to exist in itself is *due* since actual existence does not belong to the essence of any created thing. 5 Further, Poinsot insists that to exist in itself " connotes more than a mere negation of existing in another; rather it connotes a positive perfection." This is because to exist in a dependent way is to exist in an imperfect way, so to exist independently must be to exist in a more perfect way. 6

Finally, Poinsot distinguishes between the substance and the supposit. The substance is the complete nature of the thing, while

2 Ibid., p. 523.

a " Substance " as a supreme genus cannot strictly be defined since it cannot be differentiated from any higher genus.

4 Haec autem proprietas existendi per se intelligitur vel secundum considerationem absolutam et *in ordine ad se,* et sic dicitur subsistens, quasi non indignes alio ut sustentetur, *sed in se sistens;* vel dicitur secundum habitudinem *ad alia,* quatenus illa sustentat in esse, et sic dicitur non solum subsistens, sed etiam *substans.* Ibid., p. 523.

5 --- esse actu per se vel in alio non est ipsa quidditas substantiae vel accidentis, quia esse seu existere in nulla quidditate creata est intrinsecum praedicatum. Ibid., pp. 523-524.

6 Perseitas substantiae non consistit in sola negatione, sed in ratione positiva. Ibid. p. 524.

the supposit is such a nature terminated by an essential mode so as to be complete and incommunicable to another. [7] This is theologically important since Christ had a complete human nature but it did not subsist in itself; rather it subsisted in the Divine Logos.

Poinsot's discussion of substance in general offers strong grounds for arguing that if anything exists, substances exist. For it seems that a thing must either exist in itself or in another. **If** anything exists in itself then substances exist. **If** anything exists in another, then it must ultimately inhere in something that exists in itself, or else an infinite regress of accidents will obtain. In any event, therefore, it seems substances must exist. However, Poinsot's general notion of substance does not tell us anything (nor is it intended to) about the nature of specific sorts of substances. Further, it does not give us sufficient criteria for picking out what things in our experience are substances. For this we must move from the general ontology contained in the material logic to the special ontology contained in Poinsot's treatise on natural philosophy. [8] There we will see the particular way in which the general nature of substance is realized in composite substances, a way which necessitates introducing the further ontological notions of form and matter in addition to those of essence, existence, and supposit.

The Nature of the Forms of Composites

Having discussed Poinsot's view of the nature of substances in general we now pass to a discussion of his view of the nature of the substances we are most familiar with, namely, composite substances. Some might question whether there are any composite substances; however, supposting, as common sens·e does, that things such as trees or cats are substances, it seems that

[7] Subsistentia, suppositum, hypostasis seu persona explicant terminum non intrinsecum et essentialem substantiae quasi praedicatum constitutum, sed extrinsecum, ad quern spectat reddere naturam ultimo incommunicabilem alteri. Ibid., p. 525.

[8] *Cursus philosophicus thomistirns;* vol. 2, *Philosophiae naturalis prinza pars: de ente mobili in communi* (Turin, Italy: 1820).

there are composite substances.   Such composite substances must
be made out of (1) certain parts which are (2) structured in a
certain way by an overall form.   That a composite must be made
out of parts seems self-evident since without such parts it would
be simple.[9] Further, that these parts must be determined in some
way seems clear since, were they not, then the parts would re-
main a heap and would not constitute a composite substance that
is *per se* one.[10]

So much, then, seems evident at the outset.   What is not evi-
dent, however, is the precise nature of the form determining the
essence of a composite substance.   Many contemporary philos-
ophers take what might be called a " structuralist " view of form.
They view form, not as one of the *parts* constituting the composite
substance, but as an intimate *relation* of the parts which produces
new, emergent properties.   One philosopher who takes such a view
is Ivor Leclerc.   It is very clear that in his view substantial forms
are relations, or rather *relatings,* which, in relating already exist-
ing substances, give rise to properties none of the substances they
relate have.   This is what makes such relations substantial.

Now, the significance of this [the theory of the molecule] is that
scientific theory has been employing the concept of an entity which
has features, *qua* molecule, which are not merely the sum of the char-
acters of the constituent atoms.   That is to say, the concept of a
molecule entails that the entity have a group character dependent
upon a group structure, and that this group structure-and concomi-
tant character-is   something over and above, and not reducible to,
the individual characters of the constituents.   For there is nothing in
the individual natures of the atoms whereby a togetherness with
others in a particular pattern or structure should result in a par-
ticular character of the group--for example, that one particular pat-
terned togetherness should have the character of water another of
salt, and so on.   It is important to note that the very concept of a
geometrical pattern or structure of the group involves going beyond
what is entailed in the characters of the atoms individually-i.e.,   the

[9] Poinsot goes further than this, holding that anything without material parts
must be " immaterial, spiritual and intelligent."   Ibid., Q. VI, art. 1, 103.
[10] Ibid.

geometrical structure of the group is not reducible to the individual extendedness of the atoms.11

The example of water used by Leclerc can serve to make his position clearer. For him the parts making up the water are oxygen and hydrogen; but the water, as water, has qualities hydrogen and oxygen do not have and as water it cannot just be hydrogen plus oxygen or it would have no substantial integrity. Hence, Leclerc would say that in addition to the parts of the water there is a structure or relation which, in intimately relating hydrogen and oxygen, gives rise to the properties of the water. This form is reflected in the formula for water which specifies that water is *two* parts hydrogen and *one* part oxygen. This very relation is, for Leclerc, the substantial form of water.

John Poinsot was aware of the view of form as relational structure. In raising objections opposed to his own view of form he gave arguments in support of a structuralist view of form. The first argument is that " form must be something other than the parts making it up because it is caused by the union of the parts, therefore the parts as causing do not have unity, but union. The whole however has unity. Thus the whole is distinct from the parts as unity from union. Unity, however, is opposed to multiplicity, while union supposes it. Therefore, unity is distinguished from union taken as unified parts." [12] The second argument is that since the composite has properties the parts do not have [13] (we would call such properties " emergent properties "), the forms of composites must be constituted by a form structuring them that is other than their parts.

Although stating the arguments for what we might call the " structuralist" view of form very powerfully, Poinsot disagrees

n Ivor Leclerc, *The Philosophy of Nature* (Washington, D.C.: The Catholic University of America, 1986) p. 123.

12 --- unitas totius per se causatur ex unione, et ita partes ut causantes non habent unitatem, sed unionem, totum autem habet unitatem. Ergo sic distinguitur totum a partibus sicut unitas ab unione. Unitas autem opponitur multiplicati, unio autem pluralitatem supponit. Ergo unitas distinguitur ab unione seu partibus unitis. *Philosophia naturalis: pars* I, Q. VI, a. II, p. 105.

11 Ibid., p. 106.

with that view for two reasons. He does not see form as a relational structure but as the primary component of a thing making it to be the sort of thing it is. As such, form is more like a
substantial quality than a substantial relation, and thus it was
often compared by Thomists like Poinsot to the difference determining a genus to a certain species (for example " rational "
which determines the genus " animal " and " composes " wtih
that genus the essence " human ").   In the words of Schmid :
" *Forma* is the more specific definiteness that imparts to a subject, in itself indifferent, its characteristic peculiarity." [14] This is
admittedly somewhat vague, but to get a clearer picture of
Poinsot's view of substantial form we must first carefully examine
his arguments for rejecting the notion that form is a relational
structure.

   His first argument centers on the function of form as conferring substantial being. I will consider this in a moment, as it
is his most profound argument.   His second argument is a kind
of *reductio ad absurdum.*

The same view is ultimately confirmed because if there is a third
entity resulting from the united parts it is either really identical with
those parts or it is united to them though not identical with them but
holds itself apart from them. If the first is the case it is therefore
not distinguished from the parts since it is identical with them. If the
second is the case it follows that either from the union of the third
entity with the parts another composite will result or it will not result. If it does not result why then will something result from the
parts of the first unity? For there is no reason why from the first
union there should result a new thing and not from the second since
both unions are ordered to composing a whole. If indeed some third
does result a process to infinity will occur.... If the third alternative is the case it follows that the third resulting entity does not pertain to the same composite because they do not communicate between themselves nor constitute something one; for even accidents
need to be joined [to their subjects] in order to compose something
with them. [15]

   [14] H. Schmid, *The Doctrinal Theology of the Evangelical Lutheran Church*
(Minneapolis: Augsburg, 1961), p. 674.
   [15] Ultimo confirmatur ista sententia, quia si daretur illa tertia entitas resultans ex partibus unitis, vel illa identificatur realiter cum partibus vel illis
unitur, licet non identificetur, vel nee unitur nee identificatur, sed seorsum se

One might object to this argument that it supposes that the form giving substantial being to the composite must be a thing. It may, however, be a relation and hence the infinite regress would not occur. To such an objection Poinsot would make use of his second and more profound argument for rejecting the structuralist view of form. This argument is that form, in giving substantial being, cannot be an accident; but if it were a relational structure it would be an accident. The reason that a relational structure is an accident according to Poinsot is that a real relation requires already existing substances to be related. But if that is the case it would seem that this relation could only modify such substances in an accidental way and could not give them radical being as substances.

Whence St. Thomas supposes, what seems most true, that that third form resulting from the parts, which is said to be the form of the whole, must actualize and perfect those parts ; for it could not hold itself separate from them nor relate to them accidentally, but would have to affect them, otherwise it could not be said that an *unum per se* resulted from those parts if the form of the whole had no relation to them. If, however, it is connected with them, it cannot be compared to them as something which is less perfect than they and perfectible through those parts, but it must be compared to them as something perfecting and actualizing them, since it is their completion (i.e., it is that which forms them into a composite substance). Since, however, it does not give them first actualization ... it con-

habet ad illas. *Si primum,* ergo non distinguitur a partibus, siquidem identificatur cum illis. *Si secundum,* ergo vel ex illa unione entitatis tertiae cum partibus resultat aliud tertium compositum vel non. Si non resultat, cur ergo resultabit ex partibus prius unitis? Nec enim est ratio, cur ex ista unione resultet aliquod tertium, et non ex alia, cum utraque unio ordinetur ad componendum totum. Si vero resultat aliquod tertium, dabitur processus in infinitum. Nam etiam illud tertium debet iterum uniri cum ipsis, a quibus resultat, et sic resultabit aliud, de quo idem dicemus, et sic in infinitum. *Si dicatur tertium,* ergo illae partes unitae et ilia tertia entitas resultans non pertinent ad idem compositum et ad idem totum, siquidem ea, quae nee uniuntur nee identificantur, non pertinet ad idem compositum, quia non communicant inter se nee constituunt union; nam etiam accidens unionem requirit ut componat cum subjecto. Ibid., p. 107.

sequently does not primarily and *per se* constitute them nor give them first and substantial being ... therefore it gives them accidental being.[16]

The point Poinsot is making here was to be later made forcefully by Leibniz. Leibniz could not see how any relation of substances, which nevertheless kept those substances intact as distinct substances, could make up an *unum per se.* For any such relation would still be a relation of distinct things that could not make up one thing in the most strict sense of the word.

Nothing will ever be found fitted to constitute a true substance out of several beings by means of aggregation; for example, if the parts which fit together for a common design are more appropriate to constitute a true substance than those which are in contact, all the officials of the India Company in Holland would constitute a real substance better than would a pile of stones. But such a common design-what is it but a resemblance, or rather an arrangement of actions and passions, which our mind sees in different things? If unity by contact should be preferred as the most reasonable hypothesis, other difficulties would be found : the parts of solid bodies are perhaps united only by the pressure of surrounding bodies and by their own pressure, and in their substance they may have no more union than a pile of sand. Why will many rings linked together to constitute a chain compose more of a true substance than if they had openings by means of which they could be separated? [17]

16 Ibid., p. 106. Ubi S. Thomas supponit, quod verissimum est, quod ilia tertia forma resultans ex partibus, quae dicitur totum, actuat et perficit ipsas partes; nee enim disparate se habet ad illas nee per accidens, sed cum connexione et perseitate, alioquin non diceretur unum per se illud totum sic resultans ex illis partibus, si connexionem cum illis non habet. Si autem cum illis connectitur, non comparatur ad illas, ut aliquid minus perfectum et perfectibile per partes, sed ut perficiens et actuans, illas, cum sit illis perfectius. Cum autem non actuet dando primam actualitatem ... consequentur nee primo et per se constituit nee dat primum et substantiale esse, quia supponit primum esse datum per (primam) formam, ergo dat esse accidentale.

17 *Leibniz; Discourse on Metaphysics/Correspondence with Arnauld/Monadology,* trans. by George R. Montgomery (LaSalle, IL: Open court, 1980), pp. 197-198. It is interesting to note that Matthew Liberatore used an acknowledged Leibnizian premise to argue for the existence of substantial form: " Extensio <licit partes extra partes, nempe multiplicitatem; et nihilominus requirit unitatem, quippe primum elementum extensionis, nempe continuum, unum est et in se indivisum. Ergo substantia extensa, praeter principium a quo oritur

It is the same sort of emphasis on the unity of substance that led Poinsot to insist that substantial form cannot be a relation between substances binding them together, but must be a constituent, indeed the primary constituent, of a substance. From this it follows that what form determines in giving being to a composite substance is not a plurality of already existing substances, but primary matter, which is a pure potency. Substantial form spreads this matter out, so to speak, giving rise to the various parts of composite substances, but at the same time unifying them into one substantial whole: "... the integral parts are actual beings through one form of the whole which is of all the parts; for each part does not have its own form and therefore it is drawn to the same being of the whole." [18]

Some philosophers would not agree with Poinsot's reasoning with respect to prime matter. Poinsot holds prime matter must be a pure potency having no being of its own separate from form. If it did have some being of its own it would be itself a substance according to Poinsot and so any form informing it could only give accidental, not substantial, being. But for many philosophers it is hard to conceive of the various parts of composite substances as being given their *entire* being by the form which makes the substance one composite substance of a certain sort. My heart is not the same as my liver, and yet both seem essential to me, since without them I would not exist. This means they are substantial, not accidental. It does not seem their *distinct* being, however, could be given by the *single* substantial form which unifies me into a single substance. For how could

multitude partium, aliud principium postulat a quo unitas effiorescat. At vero unitas nonnisi ex simplici et per se inextenso effiorescere potest. Ergo ad essentiam corporis constituendam, praeter materiam seu fontem multiplicitatis et partium, necesse est principium aliud per se simplex et partibus carens, ex quo materiae unitas et indivisio dimanet. Hoc autem principium vocatur forma." Liberatore, *lnstitutiones philosophicae; vol. II, metaphysica specialis* (Rome: Giachetti, Filii et Soc., 1889), p. 123. This argument is similar to the argument I give in defense of Poinsot's view of substantial form.

[18] Op. cit., p. 107.

form, as a principle that gives unity to the whole of the composite, also give distinct being to the liver or the heart? [19]

Nevertheless, even if we suppose that matter cannot be pure potency for the sake of argument, I think that Poinsot's reasoning for the existence of substantial forms conceived as constituent parts can still be defended. This is because even if the subject form informs is not held to be a pure potency, but a plurality of distinct substances arranged in a certain order, form is necessary to give unity to these substances and to bind them together as parts of a single substance. This form, unifying the composite substance, cannot be a mere relation, for relations, of all properties, have the least degree of ontological thickness. Nor could this form be any sort of accident since accidents can only give accidental being. It must therefore be a principle in the substantial order, making the composite of it and the lesser substances it informs into something *per se* one. In so doing it will be the principle of substantial being of the composite, since that which

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[19] Laid out, the argument for this is as follows :

(1) Every integral part of a substance is really distinct from every other integral part of that substance by its own entity.

(2) **If** (1), then the integral parts of a substance are not constituted by prime matter alone, nor by prime matter and a single form.

(3) The integral parts of a substance are not constituted by prime matter alone nor by prime matter and a single form.

(4) **If** (3), then the integral parts of a substance are either not constituted by prime matter at all or they are constituted by prime matter and a plurality of forms.

(5) **If** they are constituted by prime matter and a plurality of forms, then the forms that partially constitute them are either substantial or accidental.

(6) The integral parts of a substance are not accidents.

(7) **If** (6), then the integral parts of a substance are not constituted by accidental forms.

(8) The integral parts of a substance are not constituted by accidental forms.

(9) The integral parts of a substance are either constituted by prime matter and a plurality of substantial forms or they are not constituted by prime matter at all.

(10) **If** (9), then the material out of which a composite substance is made is a plurality of lesser substances.

(11) The material out of which a composite substance is made is a plurality of lesser substances.

gives substantial unity must be something in the substantial order, and since substantial unity, as such, follows upon substantial being. Thus, the principle of the substantial unity of a thing must be identical with the principle of the substantial being of a thing. But the substantial principle of being of a thing simply is the substantial form of that thing.

One might object that the view of form here presented is no better than the view of form as a relation. For on this view, as on the relational view of form, form would immediately inform already existing substances. Yet there is this difference between the two views: on the view I am defending, what relates the simpler substantial parts of a more complex substance is *not* a relation but a substantial form. And one might conceive that such a form, while it leaves the lesser forms of the substantial parts of the composite intact, robs them of their independence, of their mode of existing *in se,* and makes them to exist as constituent parts of the composite. Such a form, then, would not be parasitic on the lesser substances it informs, as in the relational view, but would be a substantial quality, as it were, giving new substantial unity to the parts of the composite and bestowing powers of a higher order upon the composite than those of the lesser substances that constitute the matter of the composite.

This seems possible because forms of substances below the level of animal life are very imperfect and hence it may be that they could come together to form the proximate matter for a form of a more perfect order which would further complete and perfect them. In this I am, I think, in agreement with the school of Scotus and Occam.[20] This view further seems possible in light of the incarnation. In the incarnation a complete human nature was, as it were, stripped of its natural mode of independent existence, and was given such a mode of existence by the divine nature into which it was assumed. In this way, although it retained its own human nature, it did not subsist by that nature but by

[20] Cf. Marilyn McCord Adams, *William Ockham: Vol. II* (South Bend, IN: University of Notre Dame Press, 1987), c. 15, esp. pp. 664-667.

the nobler nature to which it was joined. Anyone, therefore, who admits the possibility of the incarnation must admit the possibility that lesser substances can be stripped of their substantial independence by forms of a nobler nature than their own, consequently being given substantial unity and existence as parts of the higher composite which they, along with the substantial form of the composite, constitute.

For the above reasons it is possible to accept Poinsot's view of form as a constituent part of the composite substance without accepting his notion that what form informs is a pure potency. Form cannot be a relation but must be something more absolute, intrinsically perfecting and unifying the subject it informs in a way relations, which are more external, could not. In this light one can understand why Suarez says that substantial form is a sort of substantial quality since in the table of accidents quality is more intrinsic and absolute than quantity or relation. [21] One can also understand why Poinsot links quality most explicitly to substantial form:

Among all accidents, quality has the property of rendering a subject formed and qualified, as St. Thomas, following Aristotle, points out ... Of all aocidents, quality is the one which properly improves and qualifies a subject. Quantity, on the contrary, quantifies and rather materializes a subject by extending and ordering its material parts. Other categories either refer a subject to something else, as relation, or depend upon some extrinsic principle of order, as the last six categories. Quality alone is essentially relative to the improvement and qualification of the subject--or to the contrary of improvement and qualification. Now, to render something such and such means to affect it by what is actual, to determine it in the way proper to form. This is why the essential difference is said to be predicated after the fashion of a quality : it contracts and determines the genus, and, by determining it, forms and qualifies it. What the essential difference does in the order of essence, quality does in the order of accidents; both, of themselves and in strictly proper fashion, form and qualify what is potential and formless.[22]

[21] *Disputationes metaphysicae,* XLII, introduction, para. 3.

[22] *Cursus philosophirns thomisticus; Ars logicae secunda pars,* Q. XVIII, a. I, p. 609. Inter omnia enim accidentia proprium est qualitatis reddere subjectum formatum et qualificatum, ut ex Philosopho notat D. Thomas ... eo

Before leaving Poinsot's discussion of substantial form we should note that his view of form as a constituent part allows him to answer, very well, the emergentist argument for a relational view of form. [23] This argument ass·erts that composite substances have properties their parts lack; therefore something other than the parts of a composite, namely the relating form, must be posited to account for these properties. But on Poinsot's view this is not a problem since the properties of the composite flow, not from the material parts as such, but from the formal part, which did not exist before the creation of the composite. Thus that hydrogen and oxygen lack properties that water has would not prove to Poinsot that in addition to the parts comprising water there is a relation binding those parts together; rather it would prove that one of the parts of the water molecule is the substantial form of water itself. Of course this part did not exist prior to the existence of the water molecule as the hydrogen and oxygen did. But how it comes into being according to Poinsot is the subject for another paper. Suffice to say here that it cannot emerge, as it were, from the hydrogen and oxygen or an infinite regress will occur. Hence, Poinsot and other Scho-

quod qualitas inter omnia accidentia proprie nobilitat et qualificat subjectum. Quantitas enim quantificat et potius materializat subjectum extendendo et ordinando partes eius materiales. Reliqua praedicamenta vel ordinant subjectum ad aliud, ut relatio, vel ab aliquo extrinseco ordinante dependent, ut sex ultima praedicamenta, ut dicemus quaest. seq. Sola qualitas in ordine ad subjectum nobilitandum vel qualificandum datur, vel ad contrarium nobilitationis et qualificationis. Qualificare autem aliquid dicitur per id, quod est actuale et per modum formae determinans. Ideo enim differentia essentialis dicitur praedicari in quale, quia contrahit et determinat genus, quod est potentiale, et determinando illud format et qualificat. Quod ergo differentia essentialis facit essentialiter, id facit accidentaliter qualitas, scilicet formare et qualificare id, quod potentiale et informe est, idque primo et per se (translation by Simon et al., *The Material Logic of John of St. Thomas,* (Chicago: The University of Chicago Press, 1955), p. 368.

[23] The other argument which Poinsot considers for the structuralist view, namely the one based on the unity of the composite, he answers by saying that the composite is distinct from its parts as a whole including each of the parts making it up. It is not, therefore, opposed to multiplicity in every sense, since it is made up of parts, but is opposed to multiplicity taken as actual division *(Nat. phi!.* I, p. 108).

lastics attributed its existence to the efficient cause of the com-
posite substance. Such a cause introduces the new form of the
composite into previously existing matter. [24]

Reductive Materialism

In the previous section we showed that every composite sub-
stance must be constituted in part by a simple substantial form
which is not a structure but a partial substance. However, a
challenge to this might come from the reductive materialist who
holds that composites such as animals or humans are not really
substances which, insofar as they are aggregates,
have certain properties their parts lack. These properties do not
flow from any higher substantial form than those of the parts.
This is different from the doctrine of structuralism. For the
structuralist tries to unify a substance by means of a supervening
property or relation. The reductive materialist, however, simply
argues that composites can _produce actions and have properties
that their parts do not have. These actions and properties do not
inhere in any new super-substance and are, therefore, not truly
emergent properties. Take the example of a canoe propelled by
four oarsman. The action propelling the canoe is a composite ac-
tion which does not reside in any of the oarsman as such, nor in
the canoe, but the subject of the action is not some individual
over and above the oarsmen and the canoe: it is rather all of them
taken as an aggregate, not a substance. [25]

This challenge of the reductive materialist is important, and
threatens the traditional doctrine of substance which sees humans
and animals as paradigmatic of what it means to be a composite
                  The view of the reductive materialist reduces such

[24] On this see *Nat. phil.* I, Q. IV, a. II, pp. 88-96.

[25] I don't know if many present day philosophers are materialists in the
sense explained here. There were such in the past, however. See, for ex-
ample, Thomas Hobbes, *Leviathan,* ed. Michael Oakshott (New York: Collier
Books, 1962), author's introduction, p. 19. Though most present day materialist
philosophers are not reductive materialists I suspect many scientists are. (For
examples, see Richard Connell, *Mafter and Becoming* (Chicago: The Priory
Press, 1966), chaps. 3 and 4.

substances to non-substantial compounds or aggregates, and re-gards the activities of such aggregates as composite activities arising from the activities of their parts. This view threatens the integrity and perhaps also the value of the human person.

The most common objection to the reductive materialist view of material substances is that the different and more perfect powers of composites show that they have different and more perfect natures than the parts making them up. In this vein Suarez writes that " the properties and faculties themselves of composite substances indicate proper substantial forms of a nobler nature than the forms of the elements." [26] The problem with this argument is that it does not seem impossible that the more per-fect powers of composites arise from the complicated interaction of the powers of the parts of such a composite. No part of a compact disk player can play a compact disk, so, in line with Suarez's reasoning, one might argue that the compact disk player, being able to do something its parts cannot do, is a substance of a higher or more perfect nature than its parts. This is clearly absurd, however, for the ability of a compact disk player to play a compact disk need not be attributed to some mysterious form informing the whole compact disk player and not the parts, but can simply be attributed to the complex interactions of the parts. These interactions produce a complex activity that is performed by all the parts working together and not by a new substance that exists over and above the parts.

Of course the defender of the traditional argument will point out that a compact disk player is a machine and an animal is not; hence the analogy does not work. But this begs the question since it is precisely the assertion that the animal is not a machine that the reductive materialist disputes.

[26] Suarez, *Disputationes metaph:ysicae,* XV, sec. X, para. 48. Ipsae ergo proprietates et facultates mixtorum evidenter indicant proprias substantiales formas nobilioris rationis quam sint formae elementorum. For a detailed con-temporary defense of this line of argument against reductionism see Richard Connell, *Matter and Becoming,* pp. 66-98.

The traditional argument against reductive materialism there-
fore will not work.   But luckily Poinsot has another argument
which does not rest on the difference between the actions of living
substances and inanimate substances.   It runs :

The living ought to have a certain form by which they are constituted
as being living and animated and this form cannot be an accident be-
cause things inanimate have a form by which they are constituted.
Otherwise if even inanimate things had no substantial form then
nothing, whether animate or inanimate, would be constituted by a
substantial form . . . .
If, therefore, inanimate things have substantial forms constituting
them, *a fortiori* animate things do, which are more perfect than in-
animate things and are substantially generated just as inanimate
things are. 27

Put in standard form the argument looks like this :

(1) If living beings are not substances then no composites are sub-
    stances.
(2)   But some composites are substances.
(3)   Living beings are substances.

Premise (1) seems clearly true since living beings, of all com-
posite material objects, manifest the greatest unity in their vari-
ous vital activities, culminating in the activities of thinking and
willing.   Hence it does seem that if these cannot be substances
per se one then neither can molecules, or atoms, etc. Premise (2)
must be granted by the materialist since if premise (2) is not
granted all substances will be simple and something *like* Leibniz's
monadism will be the true metaphysics, in that all substances will
be simple.

27 Debent ergo habere aliquam formam, qua constituantur in esse proprio
viventis et animalis, et haec forma non potest esse accidens, quia res inanimatae
substantialem formam habent, qua constituantur, alioquin si neque etiam res
inanimatae haberent formam substantialem, nulla res, neque animata neque
inanimata, constaret forma substantiali . . . Si ergo res inanimatae habent
formam substantialem constituentem se, a fortiori res animatae, quae sunt per-
fectiores et non minus generantur substantialiter quam illae. *Naturalis philo-
sophiae quarta pars: de ente mobili animato,* Q. I, a. I, p. 18.

Conclusion

Poinsot has shown that if there are true composite substances they must be constituted by substantial forms which are thing-like and which are not mere relations of their parts, thus show-ing that a relational or structural view of form is false, and that if there are any such substances living beings are among them, thus showing that reductive materialism is false. Of course Poinsot has not shown that some form of monadism is false, and any present day defender of Poinsot's view of things would have to do so. Though I am unsure about the prospects of such an un-dertaking, it is no small feat to have shown the falsity of both the relational view of form and the reductive materialist view of substance. It seems to assure us that whatever the human being is, he or she is not any sort of organic robot.

THE *SUMMA CONTRA GENTILES* RECONSIDERED:
ON THE CONTRIBUTION OF THE *DE TRINITATE* OF HILARY OF POITIERS

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O NE OF THE most difficult and puzzling of Aquinas's works, the *Summa contra Gentiles,* has occasioned much controversy among scholars.[1] Who are the gentiles against whom Thomas is writing? Is the work principally philosophical or theological in character? Why has Thomas delayed discussion of the central Christian truths of Trinity and Incarnation to the fourth and final book of the *contra Gentiles?* How much credence should be given to the slightly later story (that is, post-Thomas) that Thomas composed the *Summa contra Gentiles* for "missionary purposes"?-these, and other such questions, have exercised the imagination of numerous students of Aquinas.

In the recent literature, Mark Jordan's " The Protreptic Structure of the *Summa contra Gentiles,,* without doubt offers the most

innovative and promising approach to this controversial work. [2]
Jordan has raised the study of the *contra Gentiles* to a new level
by identifying its genre through careful analysis. As his title in-
dicates, for Jordan Thomas's *Summa contra Gentiles* is a pro-
treptic work, an invitation to wisdom, to be precise, an invitation
to *Christian* wisdom.   Issued by one Christian to other Chris-
tians, the *contra Gentiles* in this view is a recommendation of the
more serious and sustained pursuit of the Christian form of life,
a recommendation that includes in its survey of the different
layers of Christian wisdom the depiction of the failings of alter-
native, non-Christian, versions of truth. [3] In the hands of Aquinas,
this protreptic, moreover, itself becomes a schooling in wisdom
(Jordan, p. 209) : in following Thomas in the numerous discrete
arguments that constitute the *contra Gentiles,* the Christian
reader will in fact become imbued in Christian wisdom, thus an-
ticipating in the present life the completion of this pursuit of
wisdom that will be provided in the beatific vision in the next.

  Jordan's is a powerful study and, on the basis of its structural
observations about the *contra Gentiles,* both large and local,
would seem in its core insight to be fundamentally correct. His
recognition of the protreptic structure permits a balanced assess-
ment of the traditional questions addressed to the *contra Gentiles*
(for details, see the article),   while highlighting the positive,
Christian-theological intentions of Aquinas in composing this
work. Yet, by observing two points at which his analysis flags,
it will be possible to add to Jordan's genuine contribution.

  The first of these observations concerns Jordan's treatment of

  [2] Mark D. Jordan, "The Protreptic Structure of the *Summa contra
Gentiles," The Thomist* 50 (1986) : 173-209. I have benefitted greatly from
extended conversations with Professor Jordan about his work on the *contra
Gentiles.*
  [3] Jordan specifies the term "protreptic" as follows (p. 192): "A protreptic
was originally a persuasion to the study and practice of some art or skill; for
philosophic writers, it became an exhortation to the practice of the philosophic
art, which required virtues of inquiry and contemplation." Later (p. 194),
Jordan indicates the ways in which Thomas has transformed ancient protreptic
in offering this Christian protreptic.

Aquinas's approach to scripture in the fourth book of the *Summa contra Gentiles.* That the analysis of Thomas's approach here to scripture needs deepening is surprising given the perceptiveness of Jordan's discussion of the scriptural dimension of the first three books of the *contra Gentiles.* Some earlier writers on Thomas had been eager to view these opening books as Thomas's 'summa of philosophy' or at least as an extended exercise in natural theology : in this view, these three books rehearse the successes of non-Christian philosophy in coming, through reason unaided by revelation, to truths about God, about things as emanating from God, and about God's providential care for creatures. The presence of scripture throughout these three books, then, would be merely ornamental, simply confirming from the side of Christian revelation what reason has discovered. Jordan's own consideration (pp. 204-6) of the locutions by which scriptural authorities are introduced in these books, however, dis- closes how facile such a view is. He demonstrates that Thomas's introduction of appropriate scriptural texts is meant in the first place to show the continuity between philosophical inquiry and Christian revelation : what is true in the philosophers does find its confirmation and repetition in Christian revelation, and philo- sophical insight provides in its own way an orientation to Chris- tian truth. And yet, one might add, there is disjunction as well. The philosophers have not and could not have grasped the entire truth about God, creatures, and creatures in dependence on God. Thus, by this introduction of scripture Thomas offers at the same time a commentary on the insufficiency of this philosophical in- quiry: what the philosophers say in these matters is true, but not the entire truth. It is partial and fragmentary, calling for the full- ness and certainty of scriptural revelation. [4] Another way of put- ting the point may be to speak of scripture as the unexpected culmination of philosophical inquiry, of God freely providing the entire truth about God and creatures and their mutual relations

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[4] Recall in this regard Thomas's comments in *ScG* I, 4 (especially #25) about the appropriateness of God revealing the truth about God to which the natural reason can also attain. See as well *ScG* IV, 1 (especially # 3347).

to those who have sought, albeit in an inevitably deficient man-
ner, this truth by their own power. At any rate, what Jordan
makes clear is that even in these books of the *contra Gentiles* the
use of scripture is not incidental. Thomas' s rendering of the sub-
ject matter of Books I-III is carried out in the confidence and
from the vantage point provided by the reception of the full scrip-
tural revelation. [5]

The subtlety of these reflections, however, is missing from
Jordan's comments about Book IV and its use of scripture. Apart
from a simple enumeration of the topics of the fourth book-
Trinity, Incarnation, sacraments, eschatology-Jordan is basical-
ly content to make an off-hand remark about the use of scripture
in Book IV : while in principle he is aware (obviously) that
scripture is the prime source of Christian wisdom, he merely re-
fers in passing to the 'proof-texting' of the fourth book. [6] Such
a comment has the unfortunate effect of obscuring what is most
intriguing about Book IV. Reminiscent less of the parallel treat-
ments of Trinity or Incarnation in the 'systematic' works, the
Scriptum on the *Sentences* of Peter Lombard or the *Summa the-
ologiae,* and more of the extended exposition of the Gospel of
John, Book IV represents a remarkable accomplishment in scrip-
tural theology. Far from mere proof-texting, Thomas's intention
in his treatments of significant Christian issues in the fourth book

[5] While arguably more pointed, my summary is faithful to the spirit of the
original. See as well pp. 199-203, in which Jordan reviews the hortatory struc-
ture of Books I-III.

[6] Jordan, p. 204: "It seems to me that the use of the locutions [for intro-
ducing Scriptural authorities] is more complicated [than suspected by earlier
scholars], at least before the fourth Book, where they begin to sound more
like rubrics for proof-texts on controverted doctrinal issues." See as well an
earlier comment where Jordan distinguishes Thomas's interests in the *contra
Gentiles* from those of the *Guide of the Perplexed* of Moses Maimonides, one
of the possible models for this work. On p. 198 Jordan writes: "the Scriptural
hermeneutic of the *Guide* is lacking in Thomas as a compositional motive.
Thomas is not concerned in the *Contra Gentiles* to gloss the obscurities of
Scripture, except incidentally." The inadequacy of this characterization, espe-
cially with regard to the fourth book, will become clear from what follows in
the text.

is to show the *scriptural warrant* for traditional Christian claims for the full divinity of the Son and the Spirit, and for the incarnational formula of 'one person, two natures.' In this view, then, dogmatic statements do not add to scriptural revelation and certainly are not opposed to scriptural teaching. On the contrary, credal statements arise from scripture, summarizing and crystallizing the scriptural teaching on the matters at the heart of the Christian faith. Thomas's handling of heresy is especially telling. At root, for the Thomas of the fourth book of the *contra Gentiles,* heresy arises from the faulty, fragmented reading of scripture. Heretics too read scripture, but they fail in their reading because they consider only a part of the scriptural witness on key issues. They fail, as well, by effectively diminishing scripture: rather than being shaped by God's word, the entire word, they seek to measure this word by their own limited capacities. Thomas's response to heresy is precisely what one would expect in this ' protreptic ' : not only does he undermine the claims of different heretics by submitting their own favorite texts *to* more careful scrutiny; he, especially, shapes the response to heresy so as to emphasize the more comprehensive, integrated Catholic rendering of God's word. [7]

Jordan's understanding of the *contra Gentiles,* otherwise so satisfying, requires supplementing in one additional respect. It

[7] For evidence of Thomas's scriptural method, see his detailed discussion of the incarnation of the Word in *ScG* IV, 27ff., where in countering various heretical mistakes he shows the identity of the scriptural proclamation on this question with the orthodox teaching about the hypostatic union of the two natures. In *S cG* IV, 39 (#3771), he neatly summarizes the preceding chapters : " Ex supra dictis igitur manifestum est quod, secundum Catholicae Fidei traditionem, oportet dicere quod in Christo sit natura divina perfecta et human natura perfecta, ex anima scilicet rationali et humana carne constituta; et quod hae duae naturae unitae sunt in Christo non per solam inhabitationem; neque accidentali modo, ut homo unitur vestimento; neque in sola personali habitudine et proprietate; sed secundum unam hypostasim et suppositum unum. Hoc enim solum modo salvari possunt ea quae in Scripturis circa Incarnationem traduntur. Cum enim Scriptura Sacra indistincte quae sunt Dei homini illi attribuat, et quae sunt illius hominis Deo, ut ex praemissis patet; oportet unum et eundem esse de quo utraque dicantur."

is here that we come to the heart of the present study. Thomas, of course, is not the inventor of protreptic, and Jordan has sought some generic antecedents for the *contra Gentiles.* Interestingly enough, neither of the antecedents whose special influence he evaluates in the *contra Gentiles* is Christian. Apart from some comments in passing about some early Christian examples of this genre which Thomas either did not know or failed to appreciate as 'protreptic' (p. 193), and, mention of some 12th- and 13th-century Latin attempts at protreptic with which Thomas was acquainted (pp. 194-5), Jordan singles out for extended consideration only the Maimonides of the *Guide* and the opening comments of Aristotle in the *Metaphysics,* creating the arguably anomalous situation of a Christian protreptic inspired (principally) by non-Christian work.[8] The question thus remains open: might there not be a *Christian* work whose structure and method has lead Thomas to engage in this massive Christian protreptic?

That a reader of Thomas as adept as Jordan has left the question open indicates its difficulty-a difficulty that is compounded by the vastness of the Christian literary heritage. Where might one turn for identifiably Christian models for the *Summa contra Gentiles?* A comment by Chenu in his brief chapter on the *contra Gentiles* in his influential introduction to Thomas Aquinas provides a clue.[9] Chenu, too, was intrigued by the *contra Gentiles* and insisted that, whatever else it may be, it is a sustained ' contemplation of truth.' It is in referring to the ' contemplation of truth ' in the *contra Gentiles* that Chenu recalls a lengthy citation of Hilary's *De Trinitate* (from book II)[10] which comes toward

[8] For Jordan's discussion of Aristotle, see pp. 19lff.; the analysis of Maimonides (pp. 196-9) is especially adept, disclosing how the *Guide* fails to explain certain key features of the *contra Gentiles.*

[9] M. D. Chenu, *Toward Understanding Saint Thomas,* trans. A. M. Landry and D. Hughes (Chicago: H. Regnery Co., 1964), pp. 294-5.

[10] Hilary of Poitiers, *De Trinitate.* Ed. P. Smulders [Corpus Christianorum Series Latina LXII, LXIIa] (Turnhout: Brepols, 1979-80). References to the *De Trinitate* list the book and paragraph. There is an English translation of *The Trinity* by S. McKenna (New York: Fathers of the Church, 1954). Thomas calls on *De Trinitate* II, 10 and 11 at *ScG* I, 8 (#50) : "Cui quidem

the end of Thomas's opening comments in the first book of the *contra Gentiles.* Thomas employs the citation to describe the task and responsibilities of the' wise person '-the saying from Hilary speaks of the need both to investigate and pursue Christian truth, and also to maintain the appropriate humility, inasmuch as this investigation can never in this life exhaust the mystery. Chenu's reminder of Thomas's use of Hilary is salutary; it raises the possibility that in the *contra Gentiles,* Aquinas is consciously following the lead of the *De Trinitate* of Hilary of Poitiers. And yet Chenu does no more than raise the possibility, making no attempt to argue the case for (or, for that matter, against) a possible Hilarian contribution to the structure and method of Aquinas's *Summa contra Gentiles.*[11] Thus, while Chenu points us in the right direction, it remains to establish a positive con-nection between the *contra Gentiles* of Thomas Aquinas and the *De Trinitate* of Hilary of Poitiers.

  What, then, speaks for Hilary's contribution to the *Summa contra Gentiles?* By one standard for measuring ' influence,' Hilary would seem to have had hardly any importance for this work: the *De Trinitate* is quoted here but a mere handful of times, even less than it is in such other works as the *Scriptum* on the *Sentences* of Peter Lombard the *Catena Aurea* on John, or

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sententiae auctoritas Hilarii concordat, qui sic <licit in libro *de Trin.,* loquens de huiusmodi veritate: Haec credendo *incipe, procurre, persiste: etsi non perventurum sciam, gratulabor tamen profecturum. Qui enim pie infinita pro-sequitur, etsi non contingat aliquando,* semper *tamen proficiet prodeundo.* Sed ne te inferas in i!lud secretum, et *arcano* interminabilis *nativitatis* non te im-mergas, *summam intelligentiae* comprehendere praesumens : sed intellige *in-comprehensibilia esse."* The quotation from Hilary reiterates Thomas's warn-ings against presumption, because of the limitations of human reason and the transcendence of divine truth, in I, 5 (#31) and, I, 8 (#49).

  [11] In this regard, the comment in passing of R. Cessario, *The Godly Image: Christ and Salvation in Catholic Thought from St. Anselm to Aquinas* (Petersham, MA: St. Bede's Publications, 1990), p. 101, may be somewhat misleading. The literature on Thomas's use of Hilary is meagre. See, how-ever, C. Vansteenkiste, "S. Tommaso e S. Ilario di Poitiers," in A. Piolanti (ed.), *Studi Tomistici* (Rome: Pontificia Accademia Romana di S. Tommaso d'Aquino, 1974), I: 65-71.

the *Summa theologiae.¹²* In at least this one case, however, fre-
quency of explicit citation would seem to be misleading.   Indeed,
while Thomas cites Hilary in his opening, programmatic chapters
of the *contra Gentiles* only twice-the instance noted by Chenu,
and another, from the first book of the *De Trinitate* to be noted
below-broader   comparisons of the opening chapters (1-9) of
Book I of the *contra Gentiles* and the first book of the *De Trini-
tate* make more plausible the notion that in his own work Thomas
intends to imitate that of Hilary.

   It will be useful here to recall the pertinent facts about the *De
Trinitate* and especially its opening book.¹³ The *De Trinitate* is
a massive argument in support of the orthodox teaching about
the ontological status of the Son of God who becomes incarnate
as Jesus Christ. In this argument, Hilary has two basic, com-
plementary goals : to establish the correct reading of the pertinent
scriptural material, and to eliminate heretical readings of the
biblical witness to Christ. Especially interesting is the first book
of the *De Trinitate,* which serves as the orientation to and justi-
fication for this entire enterprise.   In the first book, Hilary re-
counts his own progress in the knowledge of God, moving from
deficient pagan depictions of god (which ascribed limitations to

¹²Charles H. Lohr, *St. Thomas Aquinas,* Scriptum super sententiis: *An
index of authorities cited* (England: Avebury, 1980), p. 304, notes eighteen
references to *De Trinitate* in the *Scriptum.*   The Leonine editors list over
forty citations of *De Trinitate* in the *Summa theologiae,* but only three, in-
cluding the two discussed in the text, in the *Summa contra Gentiles;* see the
Indices to the *Summa theologiae* and the *Summa contra Gentiles* in the Leonine
edition of the *Opera omnia,* vol. 16 (Rome, 1948), p. 217. C. G. Conticello,
"San Tommaso ed i padri: la *Catena aurea super Ioannem," Archives d'his-
toire doctrinale et litteraire du Mayen Age* 57 (1990), pp. 51-2, identifies
eleven references to *De Trinitate* in Thomas's prologue to the *Catena* on
John.

¹³For an introduction to Hilary, with bibliography, see Manlio Simonetti,
" Hilary of Poitiers and the Arian Crisis in the West," in Angelo di Berardino
(ed.), *Patrology* vol. 4, tran. P. Solari (Westminster, MD: Christian Classics,
Inc., 1986), pp. 33-61; Simonetti discusses the *De Trinitate* on pp. 39-43. J.
Doignon, " Du nouveau dans !'exploration de !'oeuvre d'Hilaire de Poitiers
(1983-1988)," *Revue des Etudes Augustiniennes* 34 (1988): 93-105, offers an
orientation to more recent scholarship.

god), to more acceptable pagan accounts of god (I, 4), through the revelation of the one God in the Old Testament (I, 5), to finally, with his conversion to Christianity, the acceptance of the full knowledge of God through the Christian revelation provided in the books of the New Testament (I, 10). Hilary sees his own growth in the knowledge of God, in short, as mirroring that of the human race. Moreover, complementing this growth in knowledge is an ever-keener awareness of human limitations. For Hilary, by one's rational powers alone, one is unable to come to know God fully: one would be stuck in the defective knowledge of even the best pagans. In this light, Jewish and then Christian revelation comes as the ultimate relief, God here providing to faith the knowledge of God that would otherwise be inaccessible.[14] The appropriate human response to God's initiative in revelation, then, is humility and gratitude. [15] But, there are, Hilary continues, those who have misused this revelation granted by God. Rather than submitting themselves to it, allowing this knowledge to shape their beliefs and practice, they have sought to bend it to their own, limited reason.[16] Thus, to express his gratitude to God for the Christian revelation, Hilary will take upon himself the articulation and defense of correct Christian faith, preserving the revelation provided in scripture from its heretical deformers (I, 17). As Hilary writes in the rhetorical conclusion to the first

[14] Hilary makes the point repeatedly in Book I. See, for example, I, 10: " Proficit mens ultra naturalis sensus intelligentiam et plus de Dea quam opinabatur docetur "; I, 11 : "Hie iam mens trepida et anxia plus spei invenit quam expectabat"; I, 12: "... et haec omnia ultra intelligentiae humanae metiens sensum. . . ."; I, 13 : " Haec itaque ultra naturae humanae intelligentiam a Deo gesta non succumbunt rursum naturalibus mentium sensibus, quia infinitae aeternitatis operatio infinitam metiendi exigat opinionem. . . ."

[15] See, for example, I, 12 : " Hane itaque divini sacramenti doctrinam mens laeta suscepit . . . curam in se parentis sui creatorisque cognoscens non in nihilum redigendam se per eum existimans per quern in hoc ipsum quad est ex nihilo subsistisset. ... "; I, 14: " In hoc igitur conscio securitatis suae otio mens spebus suis laeta requieverat, intercessionem mortis huius usque eo non metuens, ut etiam reputaret in vitam aeternitatis."

[16] Hilary insists on the need to hold fast to the divine truth in scripture at I, 13. For his rejection of those who fail to submit to scripture, instead trying to bend God's word to their limited capacity, see I, 15-16.

book, in light of what God has done for him and for humanity
by fully revealing God in Christ, it is Hilary's duty to offer his
every word and experience in the service of God (I *37).* [17]
Hilary in fact discharges this duty in the subsequent books of
the *De Trinitate* in providing the close, orthodox reading of the
scriptural texts in dispute. [18]

   There is no question that the *De Trinitate* remained available
in the later Middle ages and that Thomas had access to it. [19]
Moreover, among his quotations in Book I of the *contra Gentiles*
from the *De Trinitate* is this reflection by Hilary on the duty of
the wise person to offer his entire thought and experience to
God. This particular citation is especially illuminating, for as
used here it discloses that Thomas has fully grasped Hilary's in-
tention in the first book of the *De Trinitate.* It also suggests that
Thomas wishes to develop the rest of his own work on the
Hilarian model. Just as Hilary, so too Thomas introduces his
analysis of controverted Christian truths by speaking of human-
ity's passage to ever more adequate knowledge of God, culmin-
ating in the full disclosure of the triune God in revelation. [20]

   [17] I, 37: "Ego quidem hoc vel praecipuum vitae meae officium debere me tibi,
Pater omnipotens Deus, conscius sum, ut te omnis sermo meus et sensus
loquatur."
   [18] Hilary sketches the structure of the remaining books of *De Trinitate* at
I, 21-35, often indicating the principal scriptural passages to be analyzed in
each.
   [19] See, e.g., C. Kannengiesser, "L'heritage d'Hilaire de Poitiers, l. Dans
l'ancienne Eglise d'Occident et dans les bibliotheques medievales," *Recherches
de science religieuse* 56 (1968) : 435-456, and P. Smulders, "Remarks on the
Manuscript Tradition of the *De Trinitate* of Saint Hilary of Poitiers," in
F. L. Cross (ed.), *Studia Patristica* II *[Te.:rte und Untersuchungen zur
Geschichte der Altchristlicher Literatur* 78]* (Berlin: Akademie-Verlag, 1961),
pp. 129-38. Given Thomas's association with the place at various times in his
life, it is interesting to note that Smulders in his ' elenchus codicum ' of his
critical edition of *De Trinitate* mentions (Vol. LXII, p. 16*) a manuscript
of *De Trinitate* from Monte Cassino which he dates to the 13th century.
   [20] See the reflections in *ScG* I, 3-7, on the two kinds of truth that will be
covered in this work: those truths about God that are knowable by reason
and revealed by God, and those knowable only by virtue of the divine revela-
tion, that reason of itself cannot attain. See too the transitional comments in
ScG IV, 1.

Thomas also knows of those who are insufficiently acquainted with Christian revelation or who seek to deface it. Hence, although he is quite aware of his own limitations, he perceives it his duty, as Hilary had recognized his duty before him, to offer his every word and experience to God, a duty he will discharge by articulating correct Catholic doctrine and defending this doctrine from attack. [21] The structural similarity and dependence on the first book of the *De Trinitate* evident in Thomas's opening methodological reflections in the first book of the *Summa contra Genltiles* thus lends to the entire subsequent discussion a distinctively Hilarian hue, one that is deepened by Thomas's intensely scriptural method in, especially, the fourth book.

Any assessment of the contribution of the *De Trinitate* to the *contra Gentiles* must, however, also keep in mind those points at which the two works diverge. Despite the resemblances in orientation and in use of scripture, much would seem to separate the two works and thus put in doubt the Hilarian contribution to the *Summa contra Gentiles* of Thomas Aquinas. I will mention here only those that appear to be significant points of divergence. For one, the *Summa contra Gentiles* is a much more comprehensive work, in terms of both subject matter and method. This is obvious in the first three books of the *contra Gentiles* in which Thomas discusses a whole range of issues that Hilary leaves either wholly or partly untreated-God and the creation, the providence of God-and Thomas does so through the judicious use of philosophy ('philosophy,' of course, as guided by correct Christian faith). But, it is true as well of the fourth book of the *contra Gentiles* in which, I have just suggested, the matter and method of Hilary is even more patent. Even in the fourth book, Thomas's analysis is broader and richer: for example, he dis-

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[21] *ScG* I, 2 (#9) : "Assumpta igitur ex divina pietate fiducia sapientis officium prosequendi, quamvis proprias vires excedat, propositum nostrae intentionis est veritatem quam Fides Catholica profitetur, pro nostro modulo manifestare, errores eliminando contrarios: ut enim verbis Hilarii utar, *ego hoc vel praecipuum vitae meae officium debere me* Deo *conscius sum, ut* eum *omnis sermo meus et sensus loquatur."*

cusses more topics related to the Trinity than does Hilary, de-
voting an entire series of chapters to the third person of the
Trinity *(ScG* IV, 15-25), whereas Hilary pays scant attention to
the Holy Spirit. [22] And, in his handling of the material held in
common with the *De Trinitate-the*   full divinity of the Son, and
the recognition of the full humanity as well as divinity of Jesus
Christ-Thomas goes beyond a putative Hilarian norm. Both
theologians, it is true, focus on the scriptural evidence to display
the truth of Catholic positions and to dispel heretical readings;
but, Thomas's range of heretics is more expansive, covering not
only Sabellius and Arius (Hilary's favorites), but *post*-Hilarian
heretics as well, those whose readings of scripture were, eventual-
ly, countered by the third and fourth ecumenical councils. [23]
Similarly, Thomas's discussion of Catholic truth and heretical
dissent is more streamlined and elegant than Hilary's, proceed-
ing through the pertinent scriptural material in a palpably more
logical order. [24] Finally, a zealous critic of Hilarian influence
might observe not only that explicit citation of *De Trinitate* is
rare, but that Thomas also omits in the *contra Gentiles* at least
one of Hilary's more characteristic teachings: Thomas ignores
Hilary's rather distinctive handling (in e.g., Bk. IX, 54ff.) of

[22] Hilary's references to the Holy Spirit (e.g., *De Trinitate* I, 36) are ex-
ceptional, and he hardly attempts in *De Trinitate* to show the scriptural war-
rant for the affirmation of the full divinity of the Spirit.

[23] Thus, in discussing the incarnation of the Word in *ScG* IV 28-36, Thomas
rebuts in turn the faulty readings of scripture of Photinus, the Manicheans,
Valentine, Apollinaris, Arius, Theodore of Mopsuestia, Nestorius, Euty-
ches, and Macarius of Antioch. Thomas's discussion of the incarnation cul-
minates with the consideration *(ScG* IV, 37-38) of two of the three opinions
on the union of the two natures mentioned by Peter Lombard in his *Sententiae*
(Bk. III, d. VI), seeing in them unwitting repetitions of earlier mistaken
renderings of the scriptural evidence.

[24] In *ScG* IV, 28ff., Thomas proceeds in turn against those who would
simply deny an incarnation (28), to those who reject some aspect of the
human nature assumed (i.e., the human body [29-31], or soul [32-33]), to,
finally, those who construe the union of the two natures incorrectly (34-38).
In earlier chapters (4-9) of Book IV, Thomas had rebutted thooe (Photinus,
Sabellius, Arius), who had questioned in one way or another the divinity of
the Word who assumes.

John 14:28 ('the Father is greater than I'). Rather than see-ing here a comment on trinitarian relations and the special dignity of the Father as the source of the Son, Thomas follows the more common interpretation, reading this text as a reference to the *incarnate* state of the Word. [25]

These all are important considerations for evaluating _„the thesis of Thomas's reliance on Hilary in the construction of the *Summa contra Gentiles.* Yet, I would contend, none speaks decisively against the claim that Thomas has been inspired by Hilary in the development of this distinctive work. There are a number of ways of responding to these observations that question the notion of Thomas's dependence. One way would be to look in turn at each of these arguments and show how it is over-stated or, ulti-mately, irrelevant. To consider, for example, the point about the broader subject-matter in the *contra Gentiles:* it *is* true that Hilary's work is more restricted in scope. Yet, in his intro-ductory statements in Book I of the *De Trinitate,* Hilary *had* recounted *pagan* (pre-Christian) approximations of truth, which in their incompleteness require the fuller knowledge brought by revelation, thereby opening the door, in the subsequent books of the *De Trinitate,* to the more complete consideration of pagan truth and error (along with, of course, the heretical debasement of God's revelation). That Hilary in the subsequent books chose to ignore pagan error and the detailed review of the ways in which Christian revelation judges this error, instead focusing his energies exclusively on the dispute with heretical Christians, might thus be plausibly viewed as a failure of execution on *his* part. In this light, Thomas's more comprehensive treatment of non-Christian and heretical error in the four books of the *con:tra*

[25] Thomas offers his interpretation of John 14:28 at *ScG* IV, 8 (# 3430). In other works, Thomas cites Hilary's trinitarian interpretation approvingly; see, e.g., *Summa theologiae* I 42, 4, ad 1, where he quotes *De Trinitate* IX, 54 about the greater dignity of the Father as 'giver.' For a more complete dis-cussion of Hilary's interpretation of John 14:28 and Thomas's use of it, see Bertrand de Margerie, *Introduction à l'histoire de l'exegese,* II (Paris: Les Editions du Cerf, 1983), especially pp. 87-8.

Gentiles could be termed a more perfect realization of Hilary's own project.

Nor does the paucity of explicit reference to Hilary necessarily tell against the thesis of Hilarian influence. The *Summa theologiae,* it is true, does refer much more frequently to Hilary, not only to *De Trinitate* but to *De synodis* and other works as well, and no one would dream of describing the *Summa theologiae* as ' Hilarian ' in inspiration. Yet statistics hardly settle the issue. For one thing, as I have already argued, where he does use Hilary in the *Summa contra Gentiles,* Thomas uses him astutely and faithfully, replicating in the opening of his own work Hilary's intention as stated in *De Trinitate* Book I. For another, when he refers to Hilary in the *Summa theologiae* it is often because individual statements of Hilary pose a problem: Hilary has spoken, or seems to have spoken, in a way out of keeping with Catholic orthodoxy and Thomas's own theological convictions. [26] Thus, Hilary is cited as often as he is in the *Sunima theologiae* precisely in order to elucidate him.

That explicit citation is not all that significant in the case of the *Summa contra Gentiles* can be argued in yet another way. To my mind, an intriguing feature of the thomistic corpus is that Thomas returns to the same topics in work after work. To the extent that they have bothered with the question, many students of Thomas have been content to ascribe the sheer number of these writings to development in Thomas's thought. Thomas wrote as much as he did, and repeatedly covered the same topics, to keep pace with his progress in theological reflection. While there is undoubtedly some truth to this, pedagogical concerns would seem to be of at least equal importance. [27] In the pursuit of the most

[26] Thus, for example, Thomas must explain in *ST* III 15, 5, ad 1 statements from *De Trinitate* X that seem to deny to Christ the experience of sensible pain; in *ST* III 23, 4, ad 1. he interprets benignly a comment from *De Trinitate* II that has adoptionist overtones.

[27] See, for example, the groundbreaking work of Leonard E. Boyle, " The Setting of the *Summa theologiae* of Saint Thomas " ([The Etienne Gilson Series 5] Toronto: Pontifical Institute of Mediaeval Studies, 1982).

efficacious way to teach theology, Thomas experimented in his various works with different ways of organizing and approaching the truths of the Catholic faith.

There is much to recommend this explanation. It puts structure and method into greater prominence. *How* Thomas has organized a given work surely cannot be a matter of indifference and it is worthwhile asking how his different approaches serve to promote, or to detract from, the execution of the theological enterprise. Viewing the thomistic corpus in this way also places in greater relief the question of Thomas's indebtedness to tradition. In his various experiments in theology, to what extent has Thomas been influenced by earlier theological work, by the example of earlier theologians in their organization of theology? Thomas, in fact, is never wholly enslaved to the strategy of any one of his predecessors; even where he is avowedly following another author in overall structure, he introduces significant modification. Yet, it is possible to perceive a shifting balance between tradition and innovation in different works. In some, he is more obviously indebted to earlier models for organizing theology; in others, he strikes a more independent pose. To take but the most obvious examples: in the *Scriptum* on the *Sentences* (1250s), [28] it is Peter Lombard, the twelfth century author and compiler of the *Sentences* of patristic authorities, who determines the basic order in which Thomas addresses theological questions. Similarly, in his Expositions of the *De Trinitate* of Boethius (1258-59) and Pseudo-Dionysius's *De divinis nominibus* (prepared at some point in the 1260s), the concerns and pedagogical programs of these earlier authors have determined the structure of Thomas's own approach. By the time of the *Summa theologiae* (1266-73), however, Thomas has explicitly abandoned earlier models : although he retains earlier patterns of organization in discussing discrete sets of questions within the different parts of the *Summa,*

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[28] The dating in the text follows James A. Weisheipl, *Friar Thomas d'Aquino: His Life, Thought and Work* (Washington, D.C.: Catholic University of America, 1983), "A Brief Catalogue of Authentic vVorks," pp. 355ff.

the overall pattern of organization is very much his own, reflect-
ing his mature insight into how best to organize the discussion
of the Christian faith.[29]

On this spectrum, the *Summa contra Gentiles* (1259-64)
would be a 'middle' work in more than a chronological sense.
From Hilary, Thomas received the chief inspiration for this ex-
ercise in Christian protreptic, as well as the impetus for the pre-
occupation (especially in Book IV) with scripture as the ground
of distinctively Christian truth. But, in other important re-
spects-the expansion of the range of topics, the introduction of
post-Hilarian authorities and issues, the greater interest in philo-
sophical inquiry, the different ordering of material common to
the two- Thomas shows his independence before this source.

Indeed, in the final analysis, probably the best way to allay
such qualms is to clarify what is, and what is not, involved in as-
serting a Hilarian contribution to the *contra Gentiles.* I would
recall here another of Chenu's remarks about the *contra Gentiles*
to the effect that this is the most 'historical' of Thomas's writ-
ings.[30] Chenu meant that in addition to the 'contemplation of
truth,' Thomas was concerned to meet the intellectual and reli-
gious challenge of Islam which had become especially acute both
within and outside of Christendom. But Chenu's comment is
true, it would seem, in an extended sense and helps us to get a
feel for the distance, as well as the continuity, between Hilary
and Thomas. One of the things that is most striking in the open-
ing chapters of the *contra Gentiles* is Thomas's keen awareness
of the immensity and the difficulty of the tasks before him to pro-
claim and to defend the truth. In this regard, immediately after
quoting the first book of *De Trinitate* on the duty of the wise
person, Thomas notes the *advantage* enjoyed by the ancient
doctors in dealing with the 'gentiles': unlike Thomas, these
fathers had themselves been gentiles and so understood better

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[29] Recall in this vein the Prologus to the entire *Summa theologiae* where
Thomas distinguishes that work from earlier attempts at teaching Catholic
truth.

[30] M. D. Chenu, *Toward Understanding Saint Thomas,* p. 289.

than he the arguments which he hoped to refute. [31] Given the placement of this comment, it is of course tempting to think Thomas had Hilary especially in mind. But, in *other* respects, Thomas outstrips his patristic predecessors, including Hilary, in historical knowledge. Much had happened between Hilary's time and that of Thomas, both in Christian and in non-Christian circles, and Thomas was sensitive to these developments. Indeed, given his customary thoughtfulness and commitment to not only speculative but historical research, Thomas, among 13th century authors, is especially alert to these developments. Thus, in the construction of his own protreptic, Thomas had greater resources at his disposal and was better placed to accomplish the goal that he shared with Hilary, the proclamation and safeguarding of the full revelation of God.

The point, then, is this : arguing for a Hilarian contribution to the *Summa contra Gentiles* does *not* entail claiming the *De Trinitate* as Thomas's exclusive model or single source. He clearly used other sources in the preparation of this distinctive work, [32] and he exhibits considerable initiative and freedom in its

[31] *ScG* I, 2 (# 10) : "Hoc enim modo usi sunt antiqui doctores in destructionem errorum gentilium quorum positiones scire poterant quia et ipsi gentiles fuerant, vel saltem inter gentiles conversati et in eorum doctrinis eruditi." Thomas continues (# 11) by outlining the different bases on which one can respond to the errors of Mohammedans and pagans, of Jews, and of Christian heretics.

[32] Indeed, I am convinced that it would be profitable to investigate more thoroughly the contribution of Augustine's *De Trinitate* to the *Summa contra Gentiles*. Thomas's lengthy discussion of the generation of the Word (in IV, 11) is of an Augustinian, not Hilarian, cast. For Augustine's reflections in *De Trinitate* on the reading of scripture, see, e.g., the methodological comments in the opening chapter of his first book. As for another Augustinian work which is often viewed as fundamental for the fourth book of the *contra Gentiles,* the *De heresibus* is only partly explanatory of Thomas's procedure here. Thomas does borrow descriptions of various early Christian heresies from Augustine, but this work of Augustine is hardly interested in detailing the heretical misunderstandings of scripture or grounding discrete Christian doctrinal formulations in the pertinent scriptural texts. In the latter regard, another group of early Christian sources should also be explored. It is now a commonplace of thomistic research that in the 1260s Thomas rediscovered the acts and proceedings in Latin translation of the early ecumenical councils.

composition; there is no denying this. Nor is there a *need* to deny this. That would be to ignore the *thirteenth* century origin of Thomas's work. On the other hand, there is a genuine continuity between Hilary and Thomas, one that comes to clear expression in the opening comments of the *contra Gentiles* and in the commitment to scripture, especially in Book IV. Thomas undoubtedly supplemented and even modified Hilary in the light of his other sources and his own special theological acumen. But the debt remains real, and in the modern enthusiasm for the ' recovered Aristotle ' and Maimonides and the response to Islam as formative in Thomas's work, we should not lose sight of the resources available to him from within the Christian tradition. Indeed, given the primacy of this inspiration, one might with considerable justification more truly call the *Summa contra Gentiles* an exercise in ' Hilarian theology,' one performed, however, in a distinctly 13th century key.

See, for example, Weisheipl, *Friar Thomas d'Aquino,* p. 163-68, where he summarizes the research of Backes and Geenen. Was Thomas also guided in the *Summa contra Gentiles* by this newly-recovered material? This is yet another case where reliance on explicit citation and statistics may be somewhat misleading. The lessons of the conciliar material on method may be much more profound. Thomas does quote from the early councils in the *Summa contra Gentiles* (e.g., IV, 25 [# 3624]) but hardly to the extent that he does in the later *Summa theologiae.* Yet much of the material in this dossier-for example, the correspondence of Nestorius and Cyril and the letter to Epictetus of Athanasius-displays   the same ' scriptural bent,' framing the pertinent debates in terms of the correct interpretation and reception of scripture.

THE TELEOLOGICAL ARGUMENT

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I. *Introduction*

M ANY PHILOSOPHERS think that any argument for the existence of God is " mere metaphysical specula- tion." Often these philosophers use the criteria of scientific empiricism as the standard for an "acceptable" sci- entific theory, regardless of the subject matter. While acknowl- edging Kuhn's work, *The Structure of Scientific Revolutions,* and the insights it gives us regarding how the nature of scientific theories and paradigms change, it is still appropriate to ask whether any argument for the existence of God can be formulated in such a way so as to fulfill the currently acceptable criteria of scientific empiricism. I shall explore the possibility of formulating the argument from design as an empirical scientific theory.

There are currently several schools of thought regarding the criteria of scientific empiricism.[1] Rudolf Carnap argued in *Philo- sophical Foundations of Physics* that scientific empiricism should proceed according to verificationist methodology.[2] Imre Lakatos in his work entitled *Criticism and the Growth of Knowledge* dis- cusses several schools of scientific methodology including con- ventionalism, sophisticated methodological falsificationism, and

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[1] For an anthology on this subject see the essays included in Janet A. Kourany, *Scientific Knowledge,* Part 3, "The Validation of Scientific Knowl- edge," p. 112-227.

[2] Rudolf Carnap, *Philosophical Foundations of Physics* (New York: Basic Books, 1966), chapter 2.

justificationism. ³ (Sect. **1,** 2, and 3 of "Falsification and Meth-
odology of Scientific Research Programs ").

One major school of thought regarding the criteria of scientific
empiricism is that of falsificationism. Karl Popper was one of the
leading exponents of falsificationism and both presented and de-
fended that position in his works entitled *Science: Coniectures
and Refutation* and *The Logic of Scien:tific Discovery.* ⁴ For the
purposes of this paper, I will adopt Popper's criteria of falsifica-
tion.

II. *Revised Teleological Argument*

I shall consider a form of the argument from design which in-
fers the existence of God from our experience of instances of
natural order. I shall discuss the notion of natural order in
greater detail later in this paper. I shall not count as instances of
natural order those patterns which appear randomly in nature
from time to time.

Consider the following formulation of the argument from de-
sign in *modus ponens* argument form:

(1) **If** there are instances of natural order (NO), then there is in-
     telligent design of these instances of natural order (D).
(2) There are instances of natural order (NO).
(3) Therefore, there is intelligent design of these instances of natural
     order (D).

The acceptance of the truth of the conclusion that there is **in-**
telligent design depends upon the strength of the evidence for
the antecedent-consequent relation in premise (**1)** between nat-
ural order (NO) and the existence of a designer (D). The
evidence for the truth of the antecedent, required for premise
 (2), is provided in Section IV and I shall argue in Section VI
for the acceptance of the truth of the antecedent-consequent rela-
tion.

s Imre Lakatos, *Criticism and the Growth of Knowledge* (New York: Cam-
bridge University Press, 1970), sections I, 2, and 3 of "Falsification   and
Methodology of Scientific Research Programs."
    ₄ Karl Popper, *Conjectures and Refutations* (New York: Basic Books,
1962) and *The Logic of Scientific Discovery* (New York: Basic Books, 1959).

III. *The Scientific Criterion1*

Recall Popper's method of empirical falsification. According to Popper, for a claim to qualify as empirical, a minimal requirement is that there be some evidence from experience which would indicate the claim to be false. Popper writes in *The Logic of Scientific Discovery:*

But I shall admit a system as empirical or scientific only if it is capable of being tested by experience. These considerations suggest that not the verifiability but the falsifiability of a system is to be taken as a criteria of demarcation. In other words: I shall not require of a scientific system that it shall be capable of being singled out, once and for all, in a positive sense; but I shall require that its logical form shall be such that it can be singled out, by means of empirical tests, in a negative sense: it must be possible for an empirical scientific system to be refuted by experience. [5]

It is important to point out that Popper argued that what differentiated empirical science from pseudo-science was that the " objectivity" of scientific statements lies in the fact that they can be inter-subjectively tested. Popper says:

Kant was perhaps the first to realize that the objectivity of scientific statements is closely connected with the construction of theories-with the use of hypotheses and universal statements. Only when certain events recur in accordance with rules or regularities, as in the case with repeatable experiments, can our observations be tested-in principle-by anyone. We do not take even our own observations quite seriously, or accept them as scientific observations, until we have repeated and tested them. Only by such repetitions can we convince ourselves that we are not dealing with a mere isolated " coincidence," but with events which, on account of their regularity and reproducibility, are in principle inter-subjectively testable." [6]

It is clear that Popper defines an empirical test as a repeatable experiment under controlled conditions. The procedure is deductive. Singular statements, known as predictions, are deduced from the general theory and are then tested. As Popper says,

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[5] Popper, *Logic,* pp. 40-41.
[a] Ibid., p. 45.

Next we seek a decision as regards these (and other) derived state-
ments by comparing them with the results of practical applications
and experiments. If this decision is positive, that is, if the singular
conclusions turn out to be accepted, or verified, then the theory has,
for the time being, passed its test: we have no reasons to discard it.
But if the decision is negative, or in other words, if the conclusions
have been falsified, then their falsification also falsifies the theory
from which they were logically deduced." [7]

Although a theist would argue that instances of natural order
fulfill this criterion, she might also object to the narrow and some-
what arbitrary nature of this criterion.   Thomas Kuhn recog-
nized this problem as well, but held that it was an inevitable con-
dition for the existence of science. In *The Structure of Scientific
Revolutions* he says, "Ought we to conclude from the frequency
with which such instrumental commitments prove _misleading that
science should abandon standard tests and standard instruments?
Paradigm procedures and application are as necessary to science
as paradigm laws and theories, and they have the same effects.
Inevitably they restrict the phenomenological field assessable for
scientific investigation at any given time." [8]

Popper argued that empirical strict universal statements are
falsifiable and cannot be verified, and empirical strict existential
statements are verifiable and are not falsifiable. [9] Again Popper
writes:

Strict or pure statements, whether universal or existential, are not
limited to space and time. They do not refer to an individual, re-
stricted, spatio-temporal region. This is the reason why strict exis-
tential statements are not falsifiable. We cannot search the whole
world in order to establish that something does not exist, has never
existed, and will never exist. It is for precisely the same reason that
strict universal statements are not verifiable. Again, we cannot

[7] Ibid.

[8] Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: Uni-
versity of Chicago Press, 1970), p. 60.

[9] For further information on the formulization of universal and existential
statements and logical derivations see Merrie Bergmann, James Moor, and Jack
Nelson, *The Logic Book,* "Predicate Logic: Symbolization and Syntax," p.
233-310.

search the whole world in order to make sure that nothing exists which the law forbids. Nevertheless, both kinds of strict statements, strictly existential and strictly universal, are in principle empirically decidable; each, however, in one way only: they are unilaterally decidable. Whenever it is found that something exists here or there, a strictly existential statement may be verified, or a universal one falsified.[10]

Popper argued that the only "acceptable " method for scientific empiricism to employ is that of *modus tollens* (denying the consequent) argument form. Popper says, " Consequently it is possible by means of purely deductive inferences (with the help of the *modus tollens* of classical logic) to argue from the truth of singular statements to the falsity of universal statements. Such an argument to the falsity of universal statements is the only stricly deductive kind of inference that proceeds, as it were, in the ' inductive direction '; that is, from singular to universal statements." [11] In this way, Popper tried to avoid the problem of induction which occurs when scientists employ the *modus ponens* form and commit the fallacy of affirming the consequent.

Modern analysis of the problem of induction begins with Hume and his celebrated analysis of causation in his work entitled *Enquiry Concerning the Human Understanding* (Sec. 5, Part 1). The problem of induction is that it is impossible to derive a universal statement from any number of existential statements. That is, no amount of specifically confirming instances can verify a universal law. For example, P (universal law) cannot be experimentally verified by particular instances of Q (P holding). The fallacy is shown as follows :

(4) If P (universal law) , then Q (particular instance) .
(5) Q (particular instance of P holding) .
(6) Therefore, P (universal law).

Thus Popper says in *Conjectures and Refutations,* "Every genuine test of a theory is an attempt to falsify it, or to refute

10 Popper, *Logic,* pp. 70.
11 Popper, *Conjectures,* p. 41.

it." [12] In other words, only one instance of a weight not falling
when dropped from a tower disconfirms the universal law of
gravity, while no number of instances of a weight actually fall-
ing from a tower when dropped can confirm the universal law of
gravity. Popper does allow for corroboration of universal laws
based upon confirming instances.

   The argument from design as stated fulfills Popper's falsifica-
tion criterion. All experiences of natural order may be taken as
falsification of the negative hypothesis that a designer does not
exist. In this case, the *modus ponens* argument may be translated
via the rule of replacement known as transposition [13] into the
modus tollens form:

(7) If there is not intelligent design (,._,D), then there are no in-
     stances of natural order (,_,NO).
(8) There are instances of natural order (NO).
(9) Therefore, (by *modus tollens),* there is intelligent design (D).

   The experiences we have of instances of natural order falsifies
the non-existence of intelligent design.

IV. *Instances of Natural Order*

   The term " natural order " refers to instances in nature of re-
peating patterns. These repeating patterns exhibit uniformity,
symmetry, and predictability. [14] It is precisely because these in-
stances of natural order are predictable and repeating that the
theist argues they fulfill Popper's criterion of inter-subjectivity
and can be verified.

   I would like to discuss three types of natural order which are
evident in this world. The three types are spatial order, temporal
order, and informational order.

   [12] Ibid., p. 63.

   [13] See Bergmann, *The Logic Book,* p. 189.

   [14] See Moreland, *Scaling the Secular City,* p. 43-56; Swinburne, "The
Argument From Design," *Philosophy* 43, 1968, p. 199-212.

Spatial Order

I shall refer to instances of spatial order as instances of co-presence and distinguish co-presence from co-incidence by repetition. Co-presence is characterized by the repeating arrangement of a certain structure. I shall discuss the instances of atomic co-presence and anatomical co-presence.

The simplest and most striking example of co-present order is that of the atom. Every electron that revolves around its nucleus does not revolve at just any distance from the nucleus. These orbits or shells have specific energy levels and can only contain a certain number of ·electrons. When any atom has more electrons than a specific shell can hold, the additional electrons begin to fill up the next shell. The atomic orbits of all electrons for each of the specific elements are identically spatially ordered. The electronic structure of even the most complex atoms can be viewed as a succession of filled levels increasing in energy, with the outermost electrons primarily responsible for the chemical properties of the element. Niels Bohr won the Nobel Prize in 1922 for this discovery. One of the basic ideas of quantum theory and quantum mechanics is that as these electrons jump from one shell or orbit to the next they move in discrete jumps exhibiting only a certain specific amount of energy. While studying blackbody radiation in 1900, Max Planck discovered that energy is absorbed and emitted in specific amounts. He called these amounts "quanta." In other words, these jumps from different orbits are not gradual but discrete. There is no in-between position. The periodic table of elements is based upon this spatial order. [15]

I distinguish the spatial order (co-presence) present in atomic structure from mere co-incidence by appeal to the universality of the structure. If this structure occurred only sparingly or at random, then there might be an argument for referring to these incidences as co-incidences. But, this is not an acceptable ex-

[15] See Raymond A. Servay, *Modern Physics,* "Atomic Structure," p. 216-241.

planation of the atomic structure because it is an identically re-
peated pattern for each specific element.

Another instance of natural spatial order is that of the ana-
tomical structure of animals and plants. The philosophers of the
eighteenth century almost exclusively discussed this instance of
co-presence. William Paley, in his work entitled *Natural The-
ology,* discussed the details of the anatomical structure of the eyes
and ears and marveled at the minute precision which yielded
high efficiency of operation.

It is possible to formulate an argument from the instance of
anatomical order which is immune to Darwin's criticisms. [11]
Evolution can only occur given special natural laws. These laws
include the chemical laws which specify how under certain condi-
tions inorganic molecules combine to make organic molecules,
and subsequently how these combine to make organisms.   There
are also biological laws of evolution which govern offspring and
the transference of those characteristics which are advantageous
for survival.   Those organisms that survive will be so structured
that they will be able to adapt more easily to the changing en-
vironment than competitors. These organisms will exhibit greater
anatomical spatial order than their competitors. Under these cir-
cumstances, nature guarantees that these instances of spatial
order cannot be co-incidental.

Temporal Order

The instances of natural temporal order in our world are even
more obvious than those of spatial order.   These instances of
order refer to the simple patterns of nonconscious behavior of
physical objects. The regularity of day and night, the changes
of the seasons, the succession of growth in plants and animals
are all examples of temporal order. Any example of a physical
object acting in accordance with the laws of nature and the laws
of physics, such as the laws of gravity and motion, provide ex-
perimentally testable evidence of temporal order.   Richard Swin-

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10 See Swinburne, *The Existence of God,* p. 134-136.

burne notes that " Almost all regularities of succession are due to the normal operation of scientific laws." [17] One need only look up in the sky to see examples of the predictable, uniform temporal paths that the heavenly bodies follow. The fact that we are able to predict any natural occurrence is evidence of temporal order. The universe could have naturally been chaotic.

Kant's criticism, the idea that temporal order is the result of human beings arbitrarily imposing their order on an otherwise chaotic world, can be countered by arguing that since human beings can discriminate between order and disorder, this discrimination must be in response to something independent of human beings. The argument from design holds that the temporal order in the world is independent of human being's recognition of it. As such, temporal order has been, is, and will continue to be regardless of any human being present to observe it. Temporal order is a basic feature of the structure of universe.

There has been much discussion of the many interpretations and definitions of the " anthropic principle,[18] a phrase coined by Brandon Carter in 1974.[19] Essentially, the anthropic principle refers to the self-evident and trivial fact that human beings can observe only a universe orderly enough to maintain human life. It is not my point to argue the validity of this principle. I would only like to provide a response to the potential objections which might be raised by this principle. The mere fact that order is a necessary condition for human beings to observe the universe does not make the existence of order less extraordinary and less in need of explanation. True, there would need to be a certain amount of order for human beings to exist, but there could be chaos outside the earth, so long as the planet earth was un-

[17] Swinburne, "The Argument From Design," 200.

[18] See Ian Hacking, "The Inverse Gambler's Fallacy: the Argument From Design. The Anthropic Principle to Wheeler Universes "; John Leslie, " Observership in Cosmology: the Anthropic Principle"; Joseph M. Zycinski, "The Anthropic Principle and Teleological Interpretations of Nature."

[19] Brandon Carter, *Confrontation of Cosmological Theories with Observation* (New York: McGraw-Hill, 1974).

affected by it. As Richard Swinburne points out, " There is a great deal more order in the world than is necessary for the existence of humans. So men could still be around to comment on the fact even if the world were a much less orderly place than it is ... The Teleologist's starting point is not that we perceive order rather than disorder, but that order rather than disorder is there." [20]

Informational   Order

The final instance of natural order in our world that I would like to consider is that which I refer to as informational order or order exemplified as information. [21] Donald M. MacKay addresses this sense of order when he states :

Information theory, in the more general sense it has developed over the past forty years, is concerned with all processes in which the spatio-temporal form of one set of objects or events (at A) deter-mines the form of another set (at B) without explicit regard for the energetics involved. These are situations in which we say that information flows from A to B. In the operational context, then, we can define information as that which determines form, in much the same way as force is defined in physics as that which produces ac-celeration.[22]

Both energy and information are operationally defined by what they do. MacKay differentiates the two as follows: " Whereas the work done by energy is physical in character, the work done by information is logical work. In talking about information, there is always a suppressed reference to a third party, since, as in the physical theory of relativity, we have to relate our definitions to an observer, actual or potential, before they become operationally precise." [23]

[20] Richard Swinburne, *The Existence of God* (Oxford: Oxford University Press, 1979), p. 136.

[21] See J. P. Moreland, *Scaling the Secular City,* p. 51-52.

[22] Donald M. MacKay, "The Wider Scope of Information Theory," in F. Machlup and Una Mansfield, eds., *The Study of Information* (New York: Wiley-Interscience Publication, 1983), p. 486.

[23] Ibid.

The relation between information and order is that the spatio-temporal sets must be ordered sets. The individual members of these sets are arranged in an ordered pattern which determine form. Whereas the formation of a snowflake, in which a simple structural pattern is repeated, involves high order but little information, the DNA and protein formation involve both high order and great information.

One instance of natural informational order is genetic material. Carl Sagan writes :

But complexity can also be judged by the minimum information content in the organism's genetic material. A typical human chromosome has one very long DNA molecule wound into coils, so that the space it occupies is very much smaller than it would be if it were unraveled. This DNA molecule is composed of smaller building blocks, a little like the rungs and sides of a rope ladder. These blocks are called nucleotides and come in four varieties. The language of life, our hereditary information, is determined by the sequence of the four different sorts of nucleotides . . . The genetic instruction of all the other taxa on Earth are written in the same language, with the same code book.[24]

It is an accepted idea that information is transmitted between genetic material. Most introductory textbooks in modern genetics devote entire chapters to the topic. A typical example of this is seen in *An Introduction To Modern Genetics* by Donald Patt and Gail Patt. Chapter 4 of this book, entitled " Transmission of Genetic Information," is devoted entirely to the discussion of information transfer between genetic material. [25]

All books on genetics also make use of linguistic terms. In the 12th volume of *Frontiers of Biology,* entitled " The Biological Code," editors A. Neuberger and E. L. Tatum make this point explicitly: " A sequence of nucleotides or amino acids in a nucleic acid or a protein is a *text* and the residues are *letters. Reading* is

[24] Carl Sagan, *The Dragons of Eden* (New York: Random House, 1977), p. 23.
[25] Donald I. Patt and Gail R. Patt, *An Introduction to Modern Genetics* (Reading, Mass.: Addison-Wesley Publishing Co., 1975), pp. 51-78.

a general term for any process which uses the sequence informa-
tion in one polymer to produce a defined sequence in another." [26]

How much information is contained in a single human chromo-
some if this information were written down in ordinary printed
book form in a modern human language? To summarize Carl
Sagan's explanation: A single human chromosome contains
twenty billion bits of information. Assuming that human lan-
guage has no more than 64 individual characters (letters, num-
bers, and punctuation marks), and that it would take no more
than 6 bits (6 questions) to determine any specific character,
twenty billion bits are about equivalent to about three million
characters. If we assume that there are 6 letters in the average
word and 300 words on the average page of a book, and 500
pages in the average book, the information content of a single
human chromosome would be roughly equivalent to 4000 five
hundred page books.[27]

V. *Corroboration*

Let us recall the formulation of the argument from design in
modus ponens form:

(1) If there are instances of natural order (NO), then there is in-
      telligent design of these instances of natural order (D).
(2) There are instances of natural order (NO) .
(3) Therefore, there is intelligent design of these instances or natural
      order (D).

We have seen that this argument, when restated in its *modus
tollens* form, fulfills Popper's criterion of falsifiability and thus
qualifies as a scientific theory. We now must shift our focus from
falsifiability to corroboration. The question with which we are
now engaged is that given that our theory has passed the test of
falsifiability, to what degree, if any, can we accept it as represent-
ing the truth of the matter to which it offers explanation.

[26] A. Neuberger and E. L. Tatum, *Frontiers of Biology* (New York; North
Holland Publishing Co., 1969), p. 7.

   Sasan 1 *Dragons,* p. ZS,

According *to* Popper, if a hypothesis has survived continual and serious attempts to falsify it, then the hypothesis can be provisionally accepted. " It should be noticed that a positive decision can only temporarily support the theory, for subsequent negative decisions may always overthrow it. So long as a theory withstands detailed and severe tests and is not superseded by another theory in the course of scientific progress, we may say that it has ' proved its mettle ' or that it is ' corroborated.' " [28] After having rejected the verificationist ideas of Carnap and others because of the problem of induction, it is clear why Popper stresses the provisional nature of accepting any scientific theory.

This having been said, Popper does offer some criteria by which we may speak of the degree of corroboration of a theory. It is not simply the number of corroborating instances which determines the degree of corroboration, although this is taken into consideration, but the severity of the tests and the degree of testability of the theory in question. The degree of testability is directly proportional to the degree of falsifiability. Popper says, " In appraising the degree of corroboration of a theory, we take into account its degree of falsifiability. A theory can be the better corroborated the better testable it is." [29]

At no point does Popper equate corroboration with probability. In a letter to Carnap in 1939 after Carnap's translation of Popper's term "degree of corroboration" as "degree of confirmation," [30] Popper expressed his displeasure because of the association of the idea of probability and verification with Carnap's translation. [31]

In his essay ·entitled " The ' Corroboration' of Theories," Hilary Putnam addresses Popper's idea of corroboration. Putnam says:

 [28] Popper, *Logic,* ll. 33.
 [29] Ibid., p. 269.
 [30] Rudolf Carnap, "Testability and Meaning," *Philosophy of Science* 3 (1936).
 [31] Popper, *Logic,* p. 251.

Although scientists, on Popper's view, do not make inductions, they
do "corroborate"   scientific theories. And although the statement
that a theory is highly corroborated does not mean, according to
Popper, that the theory may be accepted as true, or even as approxi-
mately true, or even as probably approximately true, still, there is
no doubt that most readers of Popper read his account of corrobora-
tion as an account of something like the verification of theories, in
spite of his protests." [32]

   Putnam points out that Popper's account of corroboration   is
not so different from the standard inductivist account of confir-
mation. Recall Popper's method of science. One is to derive cer-
tain basic statements (predictions)   and experimentally test them.
If the prediction is false, then the theory is falsified. If sufficient-
ly many predictions are true and certain boundary conditions are
met, then the theory is highly corroborated. Putnam says,
" Popper does say that the 'surviving theory' is accepted-his   ac-
count is, therefore, an account of the logic of accepting
theories." [33]

VI. *Inference to the Best Explanation*

   The statement of the argument from design that we have been
concerned with here is intended to show that belief in the exist-
ence of intelligent design is the most experimentally acceptable
hypothesis which attempts to account for the instances of natural
order in the world. At this point we need to investigate the logic
of accepting theories.

   Implicit in the spirit of the scientific method is the principle of
sufficient reason. According to Gottfried Leibniz, the principle
of sufficient reason holds for all truths, especially contingent
truth, such as we have been concerned with here. Leibniz ex-
pressed this principle simply as " There must be a sufficient rea-
son for anything to exist, for any event to occur, for any **truth**

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[32] Hilary   Putnam,   " The ' Corroboration ' of Theories," in Paul A. Schilpp,
ed., *The Philosophy   of Karl Popper* (La Salle, Ill.: The Open Court Pub-
lishing Co., 1974), p. 223.

[33] Ibid., p. 224.

to obtain." [34] The argument from design relies upon this principle that there must be a sufficient reason which explains the instances of natural order in the world.

In the case of competing hypotheses, appeal to the principle of sufficient reason will not resolve the dilemma. We need to appeal to another principle of reasoning, the inference to the best explanation.

Although the formulation of the argument from design that we have been discussing is stated in deductive logical form, the truth of premise (1) is not derived through deduction. Premise (1) is also not derived through induction either. We could never conclude that instances of natural order require intelligent design from analysis of any number of individual instances of natural order. This is not a problem because, as we have seen, if the truth of premise (1) were arrived at through induction, we would be faced with the problem of induction. So how is the truth of premise (1) arrived at? I submit that the truth of premise (1) is arrived at through the principle known as " inference to the best explanation."

We have established the fact that there are many instances of natural order in the world. These instances of natural order are confirmed not only in our daily experiences, but also in the strictly controlled environment of scientific experimentation. We must now address the questions of competing hypotheses because, as we have seen, in *modus ponens* argument form, the conclusion of the argument will deductively follow if premise (2) is accepted.

It is often the case that several different hypotheses claim to be the best explanation of some accepted set of observations. Under these circumstances, we employ the method of the inference to the best explanation in order to determine which of the competing hypotheses is, in fact, the best explanation.

What makes one hypothesis a better explanation than another? There are four criteria which logicians and scientists have tradi-

[34] Gottfried W. von Leibniz., *M onadology,* George Montgomery, trans., (New York: Doubleday, 1960), p. 158.

tionally cited in their attempt to clarify what makes one explana-
tion of observed phenomena better than others. [35] These are:

(A) Do any of the competing hypotheses conflict with established
     background knowledge?
(B) Is there more evidence supporting one hypothesis than the
     others?
(C) Is there less evidence against one than the others?
(D) Which hypothesis is simpler?

There are two major competing hypotheses that are usually
argued to be better explanations for the existence of natural order
in the world than intelligent design. These two hypotheses are:

(10) If there are instances of natural order in the world, then these
      instances of natural order are the result of chance.
(11) If there are instances of natural order in the world, then these
      instances of natural order are the result of self-ordering
      matter.

I will now argue that the instances of natural order in the
world are better explained by intelligent design than by either of
these two competing hypotheses.

Chance

Regarding premise (10), there are several reasons which in-
dicate the weakness in this explanation.

First, recall the definition of order as repeating patterns ex-
hibiting uniformity, symmetry, and predictability. Premise (10)
stands in contradiction with this definition of natural order.

The Encyclopedia of Philosophy distinguishes chance events
from other events "on the basis of whether or not men can pre-
dict their occurrence." [36] The notion of an absolutely random pat-
tern that predictably repeats is self-contradictory.

Secondly, premise (10) conflicts with the established back-
ground knowledge of scientific laws based upon repeatable sci-

[35] See Emmett Barcalow, *Open Questions: An Introduction to Philosophy,*
Chapter 1, p. 1-12.

[36] Paul Edwards, ed., *The Encyclopedia of Philosophy,* vol. 1 (New York:
Macmillan Publishing Co., Inc., 1972), p. *73.*

entific experiments. Recall Popper's notion of inter-subjectivity. Chance explanations, by their very nature, could not possibly fulfill this requirement. There is no chance regarding Newton's law of motion (force= mass x acceleration).

Third, theories of chance lead to theories of probability that, it is claimed, provide an explanation of chance. Recall that only universal statements fulfill Popper criterion of falsifiability. Carl Hempel writes "But the distinction between law-like statements of strictly universal form and those of probabilistic form pertains, not to the evidential support of the statements in question, but to the claims made by them: roughly speaking, the former at-tribute (truly or falsely) a certain characteristic to all members of a certain class; the latter, to a specific proportion of its members." [37]

Regarding natural spatial order, the explanation of chance or co-incidence fails on two accounts. First, as I mentioned earlier when discussing atomic structure, there are instances of natural spatial order that are all-pervasive. No doubt chance arrange-ments of physical objects do occur in nature, but when these arrangements continually recur the explanation of chance fails because we are able to formulate laws and make predictions as to their recurrence. No doubt by mere chance there could exist a lake such that there could be a row of trees around the lake that alternated in a pattern of maple, oak, and pine. Were we to come across such a lake with such an arrangement of trees, one acceptable explanation could be that this arrangement oc-curred by mere chance. But if we continually observed similar lakes with a similar arrangement of trees around them, the ex-planation of chance would cease to be an acceptable explanation in light of other possible explanations, such as intelligent de-sign. Therefore the explanation of chance in this instance con-flicts with the established background knowledge of predictability.

[37] Carl Hempel, *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science* (New York: Basic Books, 1948), pp. 376-386.

Self-ordering   matter

Regarding   premise (11), there is a major reason which indi-
cates the weakness of this explanation.

First, quantum physics has discovered that all elementary par-
ticles, atoms, and even molecules are identical. Roger Penrose
writes:

According to quantum mechanics, any two electrons must necessarily
be completely identical, and the same holds for any two protons and
for any two particles whatever, of any one particular kind. This is
not merely to say that there is no way of telling the particles apart:
the statement is considerably stronger than that. If an electron in a
person's brain were to be exchanged with an electron in a brick,
then the state of the system would be exactly the same as it was be-
fore, not merely indistinguishable from it. The same holds for pro-
tons and for apy other kind of particle, and for whole atoms, mole-
cules, etc.[38]

The significance of this is clear. If all elementary particles of
atoms and molecules are identical in kind, how does premise (11)
explain the fact that some of these elementary particles become
orderly   patterns,   i.e., atoms and molecules, and some do not?
Quantum physics does not recognize order and disorder as in-
trinsic properties of elementary particles. There is no recognized
property in physics known as self-ordering matter. Clearly these
unconscious entities do not possess the capability within them-
selves of creating order. If they did, then they would all be
orderly.

The objection might be raised regarding the previous discus-
sion of spatial order in reference to atomic structure. It is true
that atoms exhibit order, but there is no evidence that this order
is due to some intrinsic property of the elementary constituents
of the atoms. Therefore, premise (11) conflicts with established
background   knowledge.

[38] Roger Penrose, *The Emperor's New Mind* (Oxford: Oxford University
Press, 1989), p. 25.

Intelligent Design

In contrast to premises (10) and (11), premise (1) of the argument from design does have supporting evidence which qualifies it as the best explanation. I shall now discuss this evidence.

The strongest evidence a theist could provide in favor of intelligent design being the best explanation for the instances of natural order is that there is, in fact, a class of order which we know is the result of intelligent design, namely, human order. Natural order and human order are not different in kind, but only origin. This is not an argument from analogy. The theist is not saying that human order and natural order are merely similar or resemble one another. The theist can make the stronger claim that natural order and human order are identical in kind, but only differ in origin.

There are many examples of spatial human order. Books arranged in a library, streets arranged in a city, and even traffic lights are instances of spatial human order. Examples of temporal human order are any regularly scheduled event, such as train, bus, or airline schedules. Music also is an example of temporal human order. Examples of informational human order are also numerous. Any human language or communication is an example. Street signs and books are examples of human informational order. The list goes .on and on. All these instances of human order are the result of intelligent design. Therefore the inference to the explanation that instances of natural order are also the result of intelligent design at least has more corroborating evidence than the others we have discussed.

What is important to notice about all instances of human order is that they all involve reference to some purpose or goal. Up to this point in the discussion I have purposely not introduced any notion whatsoever regarding purpose or intention. [39] Regarding instances of human order, the elimination of purpose or mtention is impossible.

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[39] For further discussion of intention and the Design Argument see Swinburne, *The Existence of God,* p. 54-64, 84.

I agree that the introduction of specific motives and desires pertaining to the intelligent design of the universe does employ the argument from analogy, but not the general notion that some motivation, though we may never know specifically what it is, does play a part in the design of the universe. This does not violate the scientific nature of the explanation. Carl Hempel and Paul Oppenheim argued that " The determining motives and beliefs, therefore, have to be classified among the antecedent conditions of a motivational explanation, and there is no formal difference on this account between motivational and causal explanations." [40]

In conclusion, I submit that intelligent design is the best explanation for the instances of natural order in the universe. According to the criteria of inference to the best explanation, intelligent design (1) does not conflict with established background knowledge; (2) has more evidence supporting it; (3) has no evidence against it; and (4) is simpler than any competing explanation.

[40] Carl Hempel and Paul Oppenheim, " Studies in the Logic of Explanation," *Philosophy of Science* 15 (1948) : 45.

FERMENT IN PHILOSOPHY OF
SCIENCE REVISITED

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I N 1986 I published a survey of some then-recent works in academic philosophy of science, primarily in the United States *(The Thomist* 50/4 (Oct. 1986): 689-700). My theme was continuity amid change, with a secondary focus on the diversity of philosophers' discussions of science-a diversity much greater than many academic philosophers of science were then admitting.

In my earlier survey, I conceded that one recent contribution, by Ronald Giere, represents something genuinely novel in philosophy of science. I was concentrating there on an early adumbration, in article form, of Giere's new approach, which-following W. V. Quine-he has dubbed "naturalized philosophy of science." Giere soon produced a book length version of this approach, *Explaining Science: A Cognitive Approach* (1988), and it is with that book that I want to begin my survey here.

Giere says that from the beginning of his graduate studies in philosophy he had been " troubled ... because philosophical discussions of induction seemed so remote from scientific practice as [he] had known it *(Explaining Science,* p. xv). But, twenty-five years later, his skepticism had increased markedly:

From this skepticism, and some fortuitous encounters with work in cognitive science, Giere quickly went on to perceive the

I began to lose my faith in the general program.... My skepticism progressed to the point that I now believe there are no special philosophical foundations to any science. There is only deep theory, which, however, is part of science itself (p. xvi).

outlines of his new naturalized philosophy of science. This involves the view that, in general, " cognitive agents . . . develop representations of the world and make judgments about both the world and their representations of it." And, in particular in Giere's view, "scientists [are] cognitive agents and ... scientific models [are] a special type of representation" (pp. xvi-xvii). Philosophy of science is not exactly expendable, but its task becomes one of understanding what scientists do, not of providing rational foundations for it.

Later, Giere is even more explicit about the rejections this naturalized approach entails. It means, he says, giving up philosophical definitions of rationality, where he explicitly mentions Karl Popper and Larry Laudan-with their conflicting definitions of rationality-as examples (p. 8). And Giere equally forcefully repudiates other alleged philosophical foundations, whether empiricist, positivist, Kantian, etc. (p. 15).

What Giere includes in his approach is an evolutionary naturalism (with debts to Donald Campbell and George Gale, among others), openness to social influences on cognitive resources, and close parallels with " traditional [internalist] historians of science" (p. 19). However, Giere goes on, "evolutionary models of scientific development recommend some changes in the way the history of science is conceived," moving it in the direction that "social historians" have moved for other reasons: "To see the processes of variation and selection at work, one must look at many members of a research community, including those who are unsuccessful" (p. 19). [1]

Despite Giere's repudiation of "over fifty years [of] philosophy of science " in which its practitioners " have labored to ·elucidate the nature of scientific theories and the [rational] criteria for choosing one theory over others " *(Explaining Science,*

[1] An approach very similar to Giere's (in my opinion) has been provided in David Hull's *Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science* (1988)-though Hull makes no use of cognitive science models, and his examples are from the history of biological research communities.

p. 5), that enterprise continues unabated. And it is to these continuing efforts that I turn next.

I. *Conventional Philosophy of Science*

I begin with an excellent textbook that clearly and authoritatively summarizes all the traditional issues-and defends their continued relevance against the critics. The textbook is Merrilee Salmon et al., *Introduction to the Philosophy of Science* (1992), a collaborative work produced by members of the History and Philosophy of Science Department at the University of Pittsburgh.

Focusing on this one textbook is not meant to disparage the others that are now appearing with increasing frequency in a field that had long lacked adequate textbooks. Others that might have been discussed include James Fetzer' s *Philosophy of Science* (1992), with its companion anthology, *Foundations of Philosophy of Science* (1992); Peter Kosso's *Reading the Book of Nature: An Introduction to the Philosophy of Science* (1992); Richard Boyd, Philip Gasper, and J. D. Trout, eds., *The Philosophy of Science* (1991); and David Lamb, ed., *New Horizons in the Philosophy of Science* (1992).

The structure of the Salmon volume is such that it can provide useful pegs on which to hang short reviews of other recent contributions to conventional philosophy of science. The University of Pittsburgh textbook includes four parts : the first treats such general topics as explanation (ch. 1), confirmation (ch. 2), realism/ anti-realism (ch. 3), and scientific change (ch. 4) ; the second covers philosophy of the physical sciences, including space and time (ch. 5) and determinism (ch. 6) ; part three examines philosophy of biology (ch. 7) and medicine (ch. 8) ; and part four treats philosophy of psychology, especially perception (ch. 9), and artificial intelligence (ch. 10), as well as philosophy of the social sciences (ch. 11) .

On all these topics, the authors support standard interpretations. A few examples: chapter 2 (by John Earman and Wesley Salmon) concludes that, though difficulties remain, "The deep

and extensive work done by twentieth century philosophers of
science has cast a good deal of light on the nature of the prob-
lems " in the logic of science *(Introduction,* pp. 99-100).   Chapter
4, on scientific change (by J. E. McGuire), after discussing not
only Thomas Kuhn, Larry Laudan, and Paul Feyerabend but
also social constructionists and advocates of the so-called strong
program, ends with this claim:

The social theorists . . . are wedded to methodologies which tend to
reduce scientific change to a preferred basis....   All have something
in common: They essentialize....   Certainly we may "construct,"
" deconstruct," "rhetorize,"   "historicize,"   " sociologize," and "ana-
lyze."   But in evaluating and understanding scientific change we
ignore the diachronic of history [positivism's legacy] at our peril
(p. *177).*

And chapter 11 (by Merrilee Salmon) ends the book with this
conclusion : " The problem with which this chapter began was
whether a *science* of human behavior could be modeled on the
natural sciences. In the course of the chapter, we have considered
some positive and negative responses to this question, but have
shown most sympathy to the naturalistic position"   [that it can]
(p. 423).

  Why, in spite of its conventional character and in spite of its
difficulty, do I say this is a really good textbook?   First, it is
reasonably comprehensive, as one can judge from the contents
(above).   But there is more; for instance, the chapter on sci-
entific change, even though its judgments of them are fairly
negative, does include long discussions of newer approaches.
Second, the book is definitely authoritative.   Though the various
chapters have been influenced by the whole team, each has at its
head one (or two) name (s), with each a widely respected au-
thority on the particular topic discussed.   Third, as a textbook,
this one is both fair (though those attacked in individual chap-
ters might not agree) and judicious.

  However, as already noted, the text *is* difficult. At least half
the chapters would be unintelligible-or   virtually so-without
prerequisite courses in both inductive and deductive logic (in-

eluding probability and statistical inference). Furthermore, several chapters-e.g., those discussing biology, medicine, and artificial intelligence-presuppose detailed knowledge of particular sciences. I would not think of using this as a textbook in an introductory course, and it would be difficult even at a senior level and even if all the students had had the desired prerequisite courses. That is because the students would not only have to have taken these courses; they would have had to master them.

Not all the issues discussed in *Introduction to the Philosophy of Science* remain hot topics today, and I will focus here only on contributions made in the past five to ten years.

Explanation: As noted in the suggested readings section at the end of Wesley Salmon's chapter on scientific explanation in the University of Pittsburgh textbook, there is a good recent anthology on the topic, Joseph C. Pitt's *Theories of Explanation* (1988). Pitt opens his anthology with the 1948 classic by Carl Hempel and Paul Oppenheim, " Studies in the Logic of Explanation," but he also includes fairly recent criticisms by Michael Friedman (1974), Philip Kitcher (1981), and Peter Achinstein (1983). The articles reprinted vary in level of technicality, but all are reasonably technical-and even the most critical tend to view scientific explanations as an essential feature of the justification of scientific rationality or scientific progress.

Confirmation: All the readings recommended at the end of the chapter on this topic in *Introduction* are dated earlier than 1980. However, one of the two authors, John Earman, has recently published an important volume, *Bayes or Bust? A Critical Examination of Bayesian Confirmation Theory* (1992), in which he explores in detail all the issues raised in chapter 2 of *Introduction.* Not only does a Bayesian approach to confirmation continue to thrive; so do other aspects of the confirmationism (and falsificationism) that Thomas Kuhn had claimed to have buried in 1962.

Realism vs. anti-realism: This complex and perennial problem (taken up in chapter 3 of *Introduction)* has spawned a number of staunch defenses of scientific realism against its critics.

An interesting example is Richard Schlagel's *Contextual Real-ism: A Meta-physical Framework for Modern Science* (1986).
There Schlagel argues that the data of the sciences-from quan-tum mechanics to neurophysiology and linguistics-have   so trans-formed what we mean by knowledge in the twentieth century
that we need an entirely new framework of interpretation,   just as
did the philosophers of the sixteenth and seventeenth centuries, or
those at the end of the nineteenth century who had to bring their
philosophizing in line with Darwinism.   This new framework
Schlagel calls " contextual realism," to indicate that it is a sci-entific realism-that   the entities science describes are real-but
also that they are such only within particular scientific contexts.

   Schlagel's book is not an exercise in analytical philosophy-indeed, he spells out his views in conscious opposition to anal-ytical approaches.   But a science-based realism of precisely this
sort is exactly what the result ought to be if one were to apply,
in exact detail, the results of an analytical defense of " Common-Sense Realism " (or " Scientific Realism ") as laid out for in-stance by Michael Devitt in *Realism and Truth* (2nd ed., 1991).
The best-known opponent of this enterprise is Bas von Fraassen,
and he has recently represented his anti-realist/ empiricist views
in his *Laws and Symmetry* (1989).

   Theory change in science: Since Thomas Kuhn first published
The Structure of Scientific Revolutions in 1962, the notion of a
conceptual revolution in the history of science has been a con-troversial one. Recently, Paul Thagard, in *Conceptual Revolu-tions* (1991), has attempted to show, once and for all, that all
the major revolutionary advances that Kuhn (and later authors
following him) have focused on-Copernican   astronomy, New-tonian mechanics, Lavoisier's oxygen theory of chemical com-bustion, Darwin's theory of evolution, E_insteinian relativity, the
revolution in quantum mechanics, and plate tectonics in recent
geological theory-can   be accounted for without the appeal to the
irrationalism Thagard thinks he finds in Kuhn.   Thagard's view
involves contributions from cognitive psychology and artificial
intelligence, along with theories about conceptual change from
conventional philosophy of science.

Philosophy of physical scienlce: Van Fraassen, in *Quantum Mechanics: An Empiricist View* (1991), has applied his anti-realism to this most fundamental, and controversial, area in the philosophy of physics. R. l. G. Hughes, in *The Structure and Interpretation of Quantum Mechanics* (1989), provides a good, mathematically accessible van Fraassen-like account of non-relativistic quantum mechanics. Slightly more technical is James Cushing and Ernan McMullin, eds., *Philosophical Consequences of Quantum Theory: Reflections on Bell's Theorem* (1989).

Peter Achinstein, in *Particles and Waves: Historical Essays in the Philosophy of Science* (1991), traces the wave-particle debate-specifically with respect to the nature of light-to the early nineteenth century. Achinstein focuses also on James Clerk Maxwell's early particle theory of gases and on the late-nineteenth century discovery of cathode-ray particles by J. J. Thomson. Throughout, Achinstein is illustrating a philosophical debate between defenders of the " method of hypothesis " and inductivism with respect to unobservable entities. Useful as well is Christopher Ray's textbook, *Time, Space an'd Philosophy* (1991), which attempts to help those without a background in physics to understand all the philosophical puzzles associated with space and time, from Ancient Greece through Newton to contemporary cosmology.

Dudley Shapere, in an article, " The Universe of Modern Science and Its Philosophical Exploration," in Evandro Agazzi and Alberto Cordero, eds., *Philosophy and the Origin and Evolution; of the Universe* (1991), provides a genuine tour-de-force linking philosophy to the findings of physical theory, with special reference to cosmological origins. Though Shapere explicitly eschews the claim that his is a scientific realist view (along the lines of Richard Schlagel, above)-and, in addition, although his article replays the general themes about rational continuity that Shapere has been putting forward during the past decade-the survey offered in this article is a remarkable summary of an extraordinary range of scientific findings that, Shapere thinks,

shape our ways of knowing as evolutionary animals, including
our philosophies of science. In particular, Shapere says:

We need to ask *Whether quanlum mechanics and its field-the·oretic
descendants inay be telling us something about how we are to under-
stand the universe at a fundamental level, what it is to be " mean-
ingful," to be a "realistic theory," to "exist," and so forth (Philos-
ophy and :the Origin,* p. 91).

More generally, Shapere says :

A wide range of scientific approaches and results-biological,   an-
thropological, archaeological, psychological, historical--converge to
provide at least the beginnings of insight into the primitive origins
of human thought about nature and knowledge (p. 87).

   Shapere then proceeds to summarize these findings at great
length (116 pages, including notes and references), with special
emphasis on cosmological theories about the origin and develop-
ment of the universe (66 pages summarizing all the latest
theories, along with their critical challengers).   In the end, how-
ever, Shapere's real purpose is to get to his philosophical analysis,
in line with these scientific findings, of the nature of scientific in-
quiry as an accumulation of human experiences, each building on
but adding to earlier stages.
   Though Shapere never explicitly aligns himself with Ronald
Giere's naturalized philosophy of science (above), his conclusion
exhibits many similarities :

Even if there were abstract, " formal " conditions for being a theory
(such as its being an axiomatic system with correspondence rules),
such conditions would not capture the dynamic process of seeking
knowledge, which includes alterations not only of our factual beliefs,
but also our beliefs about how to explain (p. 169).

   In another article in *Philosophy and the Origin,* one of the
editors, Alberto Cordero, discusses both Shapere and Giere-
along with several other defenders and critics of what Cordero
calls " reductive naturalism "-and concludes: " What gains
credibility [from the contemporary evolutionary picture of the
history of the universe] is the notion that the universe is a causal-
ly closed system. This rules out disembodied spirits and super-
natural powers, but not natural emergent properties " (p. 434).

Others read the record differently. In a popularization of scientific cosmology, *Ancient Light: Our Changing View of The Universe* (1991), Alan Lightman devotes a final chapter to" the anthropic principle" (i.e., speculations based on the fact that it "seems plausible that not any conceivable physical conditions would allow life to form") (p. 117). And Henry Margenau and Roy Abraham Varghese, in *Cosmos, Bias, Theos* (1992), present the responses of eminent scientists when asked to reflect on science, God, and the origins of the universe, life, and *Homo sapiens.* Varghese, in his introduction, is convinced that many scientists " are fascinated by apparent evidence that cosmic processes and patterns are manifestations of an extra-cosmic intelligence "-but as I read the actual responses printed in the book, from over sixty mostly prominent scientists, far more are skeptical of such a claim than favor it. Moreover, it is not at all clear-in a debate printed at the end of the book-that the atheist philosopher Antony Flew does not win out over the philosopher of religion, H. D. Lewis (even though Varghese gives Lewis the last word). (Incidentally, though it is largely irrelevant to philosophy of science, there is an excellent recent history of conflicts between science and religion-John Hedley Brooke's *Science and Religion* [1991]-that at least touches on, in a postscript, some issues related to twentieth-century science.)

Philosophy of biology: This continues to be one of the most exciting fields in conventional philosophy of science. Reference has been made, above, to David Hull, one of the leading practitioners, whose approach has many affinities to Giere's naturalized understanding of philosophy of science. Michael Ruse, another leader in the field, has provided a number of texts that could lead the beginner into the thickets of controversies in contemporary philosophy of biology: *Philosophy of Biology Today* (1988). *Philosophy of Biology* (1989), and *What the Philosophy of Biology Is* (1989). Ruse is always opinionated, but his summaries and selections are almost always helpful-though the three books are by now somewhat out of date in this rapidly ex-

panding field. Paul Griffiths, ed., *Trees of Life: Essays in Philosophy of Biology* (1992), presents contributions to the literature from outside North America-in this case, from a conference in New Zealand.

Philosophy of psychology, cognitive science, and artificial intelligence: This lively field deserves a survey all its own. All I will list here are two books favorable toward computer models of mental functioning, and two books critical of artificial intelligence. Daniel Dennett's latest, *Consciousness Explainted* (1991), admirably summarizes and expands on his well-known arguments. Patricia Smith Churchland, in *N europhilosophy: Toward a Unified Science of the Mind/Brain* (1986), defends her reductive view. Hubert L. Dreyfus, in *What Computers Still Canft Do: A Critique of Artificial Reason* (1992), updates his earlier arguments. And John Searle, in *The Rediscovery of The Mind* (1992), adds considerably more detail to his earlier contributions to the debate.

Philosophy of social science: Merrilee Salmon's chapter on the topic in *Introduction to the Philosophy of Science* is as good a summary of the conventional approach to the issues as one is likely to find. But there are other interesting introductions: David Braybrooke's *Philosophy of Social Science* (1987); Alexander Rosenberg's *Philosophy of Social Science* (1988); and Daniel Little's *Varieties of Social Explanation: An Introduction to the Philosophy of Social Science* (1990), which provides details of actual explanations put forward in several fields in social science.

A primer on current controversies: Before turning to recent challenges to conventional philosophy of science, I want to mention one other book. That is Larry Laudan's delightful *Science and Relativism: Some Key Controversies* ini *the Philosophy of Science* (1990).   In a clever set of simulated discussions involving four imaginary interlocutors-Quincy   Rortabender (mainly representing views of Thomas Kuhn, W. V. Quine and Richard Rorty), Perry Lauwey (called a " pragmatist " and representing Laudan's own view), Rudy Reichfeigl (representing

unreconstructed positivists), and Karl Selnam (especially Hilary Putnam)-Laudan takes up such issues as holism, incommensurability, and social determinants of scientific theories. It should not be surprising that Lauwey often seems to win, but the other views are usually given a fair hearing-even including unconventional views.

II. *Unconventional Approaches to Philosophy of Science*

One of the most innovative of recent philosophers of science is Joseph Rouse. He burst on the scene forcefully with his *Knowledge and Power: Toward a Political Philosophy of Science* (1987). That book manages to combine, in an exciting synthesis, insights from philosophers as diverse as Nancy Cartwright, Ian Hacking, Hubert Dreyfus, Martin Heidegger, and Jiirgen Habermas, along with Thomas Kuhn and Richard Rorty. But a major impact comes from Michel Foucault, with his emphasis on the relationship between knowledge and power (though Rouse puts his personal stamp on these views) . The overall thrust of Rouse's book is not just anti-positivist or anti-foundationalist. He would have us recognize that research practice, typically embodied in certain choices of experimental methods and instruments, is the key to understanding particular instantiations of science in particular historical periods. Rouse's type of analysis has been confirmed by a historian, Robert Proctor, **in** *Value-Free Science?* (1991).

Later, Rouse wrote an article, " The Politics of Postmodern Philosophy of Science" *(Philosophy of Science* 58 :4, 1991, pp. 607-627), that introduces all the themes of recent unconventional approaches to philosophy of science. He takes as his foil an author, Arthur Fine, whom many would take to be quite conventional. But Rouse says Fine's position is "postmodern" in the sense that he joins " trust in local scientific practice with suspicion toward any global interpretation of science" (p. 607). The contrast Rouse is presupposing here is between " modernism," which has traditionally demanded "a unified story about what makes an inquiry scientific (or a successful science)," **and**

postmodernism as not countenancing such a foundationalist at-
titude.   Rouse says Fine labels his approach the " natural onto-
logical attitude,"   and thinks it typifies most working scientists
who have not been bamboozled by philosophers of science; Fine's
view thus has some affinity with Ronald Giere's approach
(above).   Rouse, however, wants to distinguish a variety of post-
modernist positions, only some of which are compatible with
Fine's pro-(local)-science view.

The views Rouse takes up (that I will mention here) fall un-
der three headings : views that undermine the presumptive au-
thority of science in our culture, feminist viewpoints on science
(of several sorts), and views that take the " politics " of Rouse' s
title as the fundamental focus-especially   defenders of the school
of thought called "social construction of scientific knowledge."
(These categories, obviously, are not mutually exclusive, but
they do provide a framework for the reviews that follow.)

Postmodern attacks on the authority of science: One of the
most interesting of these attacks on modernism is that of Gayle
Ormiston and Raphael Sassower in *Narrative Experiments: The
Discursive Authority of Science and Technology* (1989).   The
fundamental assumption of Ormiston and Sassower is that sepa-
rating science, technology, and th,e humanities from one another
-and especially any privileging of the first or the first two over
the third-is arbitrary, a matter of interpretation.   For them, any
text, no matter how "objectively scientific" it may seem, and
whether it is in science itself or in the philosophy of science, is
and must be in a constant state of interpretation and reinterpre-
tation, with no fixed grounding for *any* interpretation.   Nor do
they exempt their own interpretation from this assessment : " Our
fictions are no more nor less authoritative than the others we
have engaged" (p. 123).   Again:

In our readings of various texts [e.g., of Francis BaconJ, we have
insisted that texts as well as the themes and problems they articulate,
are part and parcel of an incessant generation of fictions and narra-
tives. For us, each text-including   our own-is a metanarrative, an
account of the interplay of texts . . . [orJ interpretative interven-
tions (p. 124).

What, then, makes some texts-especially   scientific texts-seem authoritative?   " There is no authority outside the performative : there is no authority outside discursive declarations.   In effect, a text can appeal only to the practices and, techniques used in its fabrication"   (pp. 124-125).   But such authoritative   performances can be *disseminated* widely in a culture:

Displacement and dissemination are inextricably intertwined with the rule instituted within [a discursive mode or set of texts]. With the replacement of one narrative with another, there remains a con-centration of authority and meaning. Moreover, there remains an illusion of a center.... But ... there remains nothing of a center-only segments, switch points, and platforms, or what [Jacques] Derrida and [Jean-Francois] Lyotard call "spacings"   (p. 126).

(Elsewhere, Ormiston and Sassower appeal to Richard Rorty and Michel Foucault as sources of inspiration.)

Rouse says that Fine repudiates such views as inconsistent with science as practiced, and Rouse himself, in his article, makes no more of this sort of view.

Feminist critiques of science: Rouse mentions   only two sorts of feminist critiques: those that critique bad science from a feminist perspective, and those that challenge " the most fundamental methodological concerns of particular disciplines " (" Politics of Postmodern Philosophy of Science," p. 621).   But I will add a third kind.

Helen Longino, in *Science as Social Knowledge: Values and Objectivity in Scientific Inquiry* (1990), while referring to more radical feminists-and   even to Foucault and Jiirgen Habermas-attempts to mediate the differences between traditional philosophy of science and the critics.   But to do so she must transform sci-entific inquiry from an individual to a social process-though thereby she thinks she can defend (a new kind of) scientific ob-jectivity.

Sandra   Harding,   in *The Science Question in Feminism* (1986), also believes a critical feminist perspective-she   calls her approach a " standpoint epistemology "-can make science more objective than it has been before. Harding's is one of Rouse's examples of a feminist perspective that only amounts to an ob-

jection *to* forms of unscientific bias. Rouse thinks, on the other hand, that Evelyn Fox Keller's approach in *Secrets of Life, Secrets of Death: Essays on Language, Gender, and Science* (1992) is the most challenging with respect *to* standard views. This is because Keller challenges the very roots of scientific methods, not just unscientific biases. In this respect, as in her focus on linguistic embodiments of scientific cultures, Keller's views may come the closest of all the feminists to the sorts of postmodernist views discussed above (and repudiated by Fine-though Rouse thinks they can be reconciled with one interpretation of Fine's views).

The "politics" of science: The first book I want to mention is Steve Fuller's *Social Epistemology* (1988). More even than Rouse, Fuller places politics at the core of an understanding of science. Fuller puts his fundamental assumption in the form of a question:

How should the pursuit of knowledge be organized, given that under normal circumstances knowledge is pursued by many human beings, each working on a more or less well-defined body of knowledge and each equipped with roughly the same imperfect cognitive capacities ... [and limited] access to one another's activities?

Given that answering this question is the goal of social epistemology-which Fuller says is the all-too-often-forgotten goal of all epistemology since Kant-" the social epistemologist would be [as in Plato's *Republic* or Bacon's *New Atlantis]* the ideal epistemic policy maker" *(Social Epistemology,* p. 3). And Fuller continues :

If a certain kind of knowledge product is desired, then he could design a scheme for dividing up the labor that would likely (or efficiently) bring it about; or, if the society is already committed to a certain scheme for dividing up the cognitive labor, the social epistemologist could then indicate the knowledge products that are likely to flow from that scheme.

A few pages later, Fuller defines the connection betwen social epistemology so defined and philosophy of science :

It would not be farfetched to say that, when done properly (that is, when done self-consciously as social epistemology), the philosophy of science is nothing other than the application of political philosophy to a segment of society, the class of scientists (p. 6).

If social epistemology is the natural culmination of post-Kantian epistemology, why is it that epistemologists of science have been so hostile toward any social or sociological or political explanation of the object of their inquiries? Fuller addresses the question specifically and proposes a revealing answer: "My own diagnosis of the situation points to a rhetorical strategy that epistemologists regularly deploy-and sociologists unfortunately fall for. It involves treating cognitive pursuits and their social organization as if they were two independent entities" (p. 9).

Fuller thereby situates himself among those employing rhetoric to get a clearer picture of science-though he does not go nearly as far in that direction as many postmodernists (see the discussion of Ormiston and Sassower, above). Where he fits within that camp is also addressed explicitly by Fuller:

One can be more or less naive about the relation of words to deeds in knowledge production. [Most] naive is the classical [especially realist] epistemologist, who takes the expressed justifications literally as referring to an extrasocial reality. A little more astute were the original sociologists of knowledge [especially Karl Mannheim], who nevertheless continued to think that behind similar forms of expression must lie similar forms of constraint ... by a discipline's dominant interest group. To counteract this naive spirit of determinism, the New Wave sociologists [Bruno Latour and Steve Woolgar, Karin Knorr-Cetina, etc.] like to say that knowledge production is " contingent " or " context-dependent" or " open-ended." Unfortunately, these expressions mask rather than remedy the shortcomings of the earlier accounts ... [in making] knowledge production seem, once again, too much under the direct control of the producers (pp. 13-14).

What is Fuller's own contrary position? He spells it out in opposition to what he takes to be the dominant position in traditional epistemology of science, scientific realism. The realist's arguments can be undercut, Fuller says, " if the sociologist admits that neither the motivators nor the benefitters of a knowledge

claim-nor even the two groups combined-have   full control over how the claim is used" (pp. 15-16).   After which Fuller explains himself by way of historical examples, ending with one particular claim-that the social epistemologist or (the right kind of) sociologist of knowledge can show the "specific institutional and rhetorical means by which mathematics has maintained [its] *power* over the years, which, as Bacon would have it, is ex-pressed as *knowledge* of the underlying structure, or 'essence,' of a widespread social practice like measuring"   (p. 16).

It will have been noticed already that Fuller, in labelling his approach, vacillates between social epistemology and sociology of knowledge.   Elsewhere. and more recently, he_ has come to have doubts about calling his approach (and that of similar authors of whom he approves) philosophy of science at all-preferring   in-stead to talk about science and technology studies (STS) as the appropriate interdiscipline (see Fuller's recent *Philosophy, Rhet-oric, and the End of Knowledge: The Coming of Science and Technology Studies,* 1993).

Fuller takes David Bloor's *Knowledge and Social Imagery* (2nd ed., 1991), with its emphatic advocacy of the so-called " strong programme,"   to be the best example of what we have earlier seen him call the New Wave in the sociology of (sci-entific) knowledge-precisely   because Bloor is so adamant in his opposition to *all* the leading philosophies of science. Representa-tive of a broader spectrum of sociologists of scientific knowledge is Andrew Pickering, ed., *Science as Practice and Culture* (1992).

I think one of the most interesting summaries of the whole strong program and sociology of scientific knowledge movement can be found in an idiosyncratic but genuinely interesting book by Malcolm Ashmore, *The Reflexive Thesis: Wrighting Soci-ology of Scientific Knowledge* (1989).   Though Ashmore's focus is on just one facet of the movement, reflexivity-subjecting   the new field to its own mode of analysis-the   book is encyclopedic in summarizing the approaches of all the participants in the move-ment.   This is true not only in chapter 2, which is explicitly

called an encyclopedia, but also in chapter 1, where Ashmore in-
troduces what he calls "the core set of sociologists of scientific
knowledge," along with their reactions to his proposal to do a
reflexive dissertation on the topic of reflexivity.

So much for unconventional philosophies-or anti-philosophies
-of science. I would be derelict in this survey of recent ferment
in the field, however, if I did not include an explicit defense of
relativism-of the sort Larry Laudan attacks in *Science and Rela-
tivism* (discussed above at the end of the section on conventional
philosophy of science). The best defense is a general one, by
Joseph Margolis, focusing only limitedly on philosophy of sci-
ence. Margolis has dealt at length with the issue in a three-
volume work with the overarching title, *The Persistence of
Reality,* as well as in more recent books. Volume I of *Persistence*
-separately titled *Pragmatism without Foundations: Reconcil-
ing Realism and Relativism* (1986)-is an adequate introduction
to the project as a whole. There Margolis spells out exactly what
he means by a defensible relativism (which, as the title suggests,
he thinks is not incompatible with the best scientific work in any
particular age or culture, though it *is* incompatible with any form
of foundationalism), corrects the inadequacies of Quine and
Kuhn (among others), and argues that all the really worthwhile
approaches to the study of science, whether Anglo-American
analytical or Continental European, are converging on a single
view. This view maintains that any alleged foundations of sci-
ence are inherently culture-bound, that science-like the social
sciences and the humanities-is always subject to interpretation
and reinterpretation, and that all knowledge-seeking activities
are motivated praxically and technologically (to assure survival).

III. *Conclusion*

If I gave the impression in my 1986 survey that there was more
continuity than change in recent philosophy of science (which
might have been mistaken even then), nothing like that could
be said today. The field, now almost a century old, has never
been livelier or more marked by internal disputes. Even a text

as determinedly devoted to the defense of conventional philosophy of science as the *Introduction to the Philosophy of Science* (discussed at length above) cannot ignore the host of new and unconventional approaches. If in 1986 there could seem to be first stirrings of a ferment in philosophy of science, today it is here in full force.

   I want to end this survey/review with one comment especially relevant to readers of this journal. What is notably missing in this recent ferment is any contribution from Thomistic philosophers of science. William Wallace continues to defend his thesis of continuity between late medieval Aristotelian natural philosophy and Galileo's science-for example, in *Galileo's Logic of Discovery and Proof* (1992)-but to my knowledge there have been no Thomistic discussions of naturalized philosophy of science, of the newer contextual realisms, of exciting developments in the philosophy of particular sciences, or of the whole array of unconventional approaches-postmodern,   feminist, sociology of scientific knowledge, etc. And that seems a shame. As I tried to show, wherever possible, in my *Dictionary of Concepts in the Philosophy of Science* (1988), there have been Aristotelian contributions to almost all the controversies in the long history of philosophical discussions of science, from Aristotle's time to our own. As controversies flourish in philosophy of science today, there is no reason why this should not continue to be the case.

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BOOK REVIEWS

Unbaptized God. The Basic Flaw in Ecumenical Theology. By ROBERT
W. JENSON. Minneapolis: Fortress Press, 1992. Pp. v ✛ 152.
$16.95 (paper).

The thesis of this potentially revolutionary book is nicely summarized
in its title: the basic flaw in ecumenical theology is the unbaptized-that
is, insufficiently trinitarian-God of Christians East and West, Protes-
tant and Catholic. The book is revolutionary because it proposes a new
way of reading the logic of a myriad of ecumenical dialogues over the
last quarter century; as a result, ecumenical theology and praotice for
which God is among the " settled " issues ought be appropriately chas-
tised by this book. But I think that *Unbaptized God* is only "poten-
tially " revolutionary because I think Jenson leaves two crucial ques-
tions unanswered.

Jenson's daring argument is made with rare clarity and compact-
ness. Consider the argument in three stages. First, in an introduction,
Jenson describes " the frustration of dialogue." He does not mean the
frustration created by the meager knowledge or acceptance of the re-
sults of ecumenical dialogues on the popular level-or the reception
without action of these results by Church officials (p. 2). He focuses
on " a third mode of frustration ": a dialogue will proceed toward a
" convergence," not without "tolerable divergence "; but the initially
tolerable divergence eventually yields " a newly virulent division." The
process is seemingly "circular" (p. 3). "No set of convergences ever
seems to be enough, once the separations are there " (p. 4) . Why?
And what can be done about this?

Second, Jenson illustrates the frustration and starts showing the way
beyond it in several different ways. He describes the dialogues in the
first two parts of the book. In Part One, Jenson takes up "The Early
Ecumenical Convergences " on issues central to the sixteenth century
reformations, Ca.tholic and Protestant: Justification (ch. 1), Real Pres-
ence (ch. 2) , and Eucharistic Sacrifice (ch. 3) . Part Two takes up
Churchly Office (ch. 4) , Episcopacy (ch. 5) , Roman Primacy (ch. 6) ,
and The Church's Mediation (ch. 7). The distinctions between the
issues of Part One and Part Two seem to be both historical and logical.
Historically, the issues of Part Two are what Walter Kasper called
the surprising "displacement of the problematic" (p. 44) from issues

considered central by Trent and the Reformers (especially justification and the eucharist) to issues that emerged after the Reformation (especially ecclesiology). Logically, the distinction between Part One and Part Two is the distinction between the traditional matters of controversy (Part One) and what are claimed to be differences "hidden at some conceptual level deeper than that occupied by the traditional matters of controversy" (Part Two) (p. 7).

I will not rehearse Jenson's splendid summaries of the many dialogues in English, French, and German (although the book ought be recommended on these grounds alone). The unofficial *Groupe des Dombes* is regularly regarded as the most ecumenically insightful, and the Dominican J. M. R. Tillard plays a particularly crucial role among Roman Catholic theologians. It is enough to say that Jenson successfully shows how each dialogue can be read as an instance of the frustration he initially mentioned: a " convergence " occurs on each topic which later turns into a " divergence " which later is converted into a " convergence " and so forth. By the end (ch. 7), everything seems to circle back to the doctrine of justification (ch. 1).

But the appearances, Jenson argues, are deceiving. "The pattern of the dialogue's history proves to be more like a spiral than a circle on a plane" (p. 103). Thus, besides describing the dialogues, Jenson must also prove that the dialogues exhibit a non-circular movement. One of the fascinating features of Jenson's argument at this stage is that he does this in a slightly different way in each of the first seven chapters. For example, he sometimes clears away "illusory dissensus" (p. 22). He sometimes concludes that "the Catholic side is right." Indeed, the Catholic side seems right on most crucial issues-on convictions about the temporal constitution of persons that constitute the background for arguments over Real Presence (p. 32); on the "new" Catholic theology of eucharistic sacrifice (p. 41) ; on episcopal succession (p. 74)-even if Catholics are sometimes right for the wrong reasons (p. 33). He sometimes appeals to the mutual Catholic-Evangelical need for "new terms of discourse," for example, to justify " apostolic succession " as sacramental [effective] sign of ecclesial continuity (p. 71). He thinks that the theological legitimacy of the bishop of Rome raises " few actually new theological problems " relative to those he raised (and resolved) with regard to the ecclesial office or episcopacy (p. 76). He sometimes searches for "more operational versions of the issue " at stake in a controversy; for example, he argues *against* the notion that the Church is a *Grunddifferenz* between Catholics and Protestants (pp. 91, 94). In sum, the diverse ways that ecu· menical theology has handled (or could handle) different topics in different bilateral and multilateral dialogues is nicely developed here. By

book's end Jenson says that the various ecumenical puzzles are "most-ly solved," even though he has not in this book aimed to " integrate the solutions spiritually" (p. 146).

Jenson's multiple strategies for concluding or re-opening the dia-logues on these topics end up showing that there is a " spiral " rather than a " circle " to the dialogues. But it is not the " spiral " of cumu-lative, developmental progress. The third and final stage of Jenson's 150-page argument is that what for some is slow ecumenical progress-consensus on one issue achieved before moving on to the next con-flict, interrupted by periodic set-backs (Chapters 1-7)-is really indi-cative of " a basic flaw in ecumenical theology" (p. 132). It is this flaw which accounts for why we need to " transcend " the old conflicts (pp. 6, 131).

What is this flaw? Jenson's rhetoric centers on what we might call an axiom of rhetorical offense: " So speak of Christ and of hearers' actual and promised righteousness . . . that what you say solicits no lesser response than faith-or offense " (pp. 22-23, 24, 120, 131; cp. 57, 121, 128). Thus, "flaw" can sometimes become "'basic' perver-sion" (p. 132) or "'basic' *false* 'consensus' " (p. 111). However, the flaw, in fact, is multi-faceted. This, I take it, is why " basic" ap-pears in scare quotes in the phrases just quoted, despite the singular in the subtitle of the hook: Jenson aims to sharpen the debate but without claiming that there is a single foundational *quaestio* to end all ecumenical *quaestiones.* The flaw is threefold. First, Jenson argues that the recurring oppositions occur against the background of a common presumption of the mutual externality of time, persons, events, and in-stitutions (ch. 8, especially p. 111). One result is that Catholics in-sist on temporal continuity and Protestants on temporal discontinuity, when both ought to agree on the storied shape of Christ's and the Church's life (pp. 141, 145). Second, the church has a "flawed chris-tology," for (with the exception of Luther [p. 129]) we have not " completely interpreted God by what happened and will happen with Jesus" (p. 119). Relying in part on (and turning on its head) Yves Congar's well-known article on Luther's christology, Jenson argues that the result has been ecclesiological monophysitism (Roman Catholics) or ecclesiological occasionalism (Protestants) (ch. 9, especially p. 125) . Finally and climactically (ch. 10), the Western doctrine of God has been either insufficiently attentive to " the Spirit's own new par-ticular initiative" (p. 134, quoting Nikos Nissiotis) or, if attentive here (as in the East), has bound the Spirit to " churchly immobility " or unchangeable *ousia* (p. 142). The West's difficulties have its "clearest symptom" (although perhaps not its "direct expression") in ancient debates over the *filioque* (pp. 122, 137). The appeal to the

East is important, for Jenson proposes that the East provides a way for Catholics and Protestants to transcend their dispute--if we can distinguish the East's doctrine of the Trinity from its commitments to *ousia* and churchly immobility. Hence the book's key thesis: the basic flaw in ecumenical theology is " a shared incompletely christianized interpretation of God" (pp. 132, 119-120, 8).

Just as I did not try to summarize Jenson's summaries of the dialogues, so here I will not try to summarize Jenson's compact case for the linkage between temporal continuity (ch. 8), Christo logy (ch. 9), and God (ch. 10). Here I will only raise two questions. First, Jenson's argument seems, by his own admission, to recapitulate the very frustration he means to transcend. That is, suppose our theologies did not simply assert but embodied the Spirit as a distinct *hypostasis* who proceeds from the Father through the Son empowering us to pray and live, eat and drink, and order our common life in anticipation of the new heaven and new earth. Suppose that this new (or renewed) theology of the Trinity was the trunk of an East-West consensus that could even hold together the branches of the Western Protestant-Catholic divide. ("Suppose," I twice said, although Jenson also says that already " to some extent " the " themes of ecumenically directed Orthodox ecclesiology have become themes of ecumenical consensus" [p. 137].) Would not what Jenson calls Eastern churchly immobility and unchangeable philosophical *ousia* become yet another " tolerable difference " or "fear" which will inevitably (as I think Jenson has shown) break out into an opposition? Jenson notes this problem and issues what may he a promissory note about " a volume paired to this one " focusing more on the East-West dialogue (p. 143). (I take it that we would also eventually need a volume on the so-called Radical Reformation, for Jenson notes that the present situation " is very little shaped by the magisterial Reformation's old controversies with anabaptists and so-called enthusiasts" [p. 10; cp. p. 26].) But it might also suggest that the picture of the dialogues spiraling toward dissensus might be replaced by the logic of a narrative (a tradition) that places revolutions against the background of " normal science." Let me explain.

One surprising feature of Jenson's descriptions of these convergences is that the *history* of the controversies is largely part of his stage rather than the play itself. That is, he usually describes the logic of the dialogues without attending to the history of the controversy which generated the dialogues. Admittedly, Jenson does sometimes attend to this history, as when he argues that the reasons for the "illusory dissensus" with regard to justification is the dialogue's common presumption that "justification" is a "universal locus" rather than at least " three different questions " viz., Paul's, Augustine's, and the Refor-

mation's {p. 22). But Jenson presumes rather than shows that these
are three continuous (if not universal) rather than discontinuous ques-
tions. This is surely in part because a book can only do so much. But
it is surprising because (as we have seen) it is essential to Jenson's
thesis that God's "origin and goal" are "reconciled" in Jesus Christ's
"story, a *narrative* word," (p. 141) so that the "church can and must
discover and practice her temporal continuity as *dramatic* continuity,
the kind of continuity that constitutes Aristotle's good stories " (p.
145). Why could not the dialogues be read as a (Alasdair Mac-
Intryrian-like) narrative, periodically disrupted by epistemological
crises requiring (or constituted by) " a new specific act of God's
grace" (pp. 8, 76) as well as "a visible and audible liturgical, homile-
tical, and church-political revolution" (pp. 9, 131, 6)? "Revolutions,"
then, would only become intelligible and practicable in the context of
a narrative larger than themselves. In any case, I doubt if there is any
way to make dialogue results so definitive that (in Harding Meyer's
phrase) they can " not be always newly put in question by ever more
subtle strategies of argument" (p. 18), although the subtleties will be
increasingly irrelevant to a church which has undergone the " liturgi-
cal, homiletical, and church-political revolution" Jenson rightly seeks.

   Second, in this first objection Jenson may well sense (wrongly, I
would hope) a Catholic/Orthodox theology of tradition that is un-
fortunately tempted to anticipate its own revolutions in what George
Lindbeck has called "a priori infallibility" *(Infallibility* [Marquette
University Press, 1972]). What might be said less abstractly and more
concretely about Jenson's material proposals for connecting time, Jesus
Christ, and God? On the one hand, it ought be said that it is clear
from this book how Jenson's evangelical theology is in the service of
a catholic project. This has not always been clear to Catholics, includ-
ing Thomists. For example, the only (as far as I know) Thomist criti-
cism of Jenson's writings before this book was precisely that his
"trinity of temporal unsurpassability " cannot be a God who tran-
scends time in eternity (e.g., William J. Hill, *The Three-Personed God:
The Trinity as a Mystery of Salvation* [Washington, D.C.: The Catholic
University of America Press, 1982], pp. 124-128). *Unbaptized God*
makes it clear that this criticism is not quite right. Jenson admittedly
says that, at one time, he had the last three chapters in a different order
(proceeding from christology through God to time), suggesting per-
haps that the nature of time was the key issue and the triune God pro-
vided clues for resolving this metaphysical problem. The triune God
would then be (in Hill's phrase) an instance of "temporal unsurpass-
ability." However, Jenson says that he came to recognize that this was
precisely an instance of the flaw he was trying to overcome, for " in

moving from God to time, one does *not* move deeper **....** Our interpretation of time results from our interpretation of God and not vice versa" (108).

We now approach Jenson's most provocative speculative proposal, for Jenson here (and elsewhere) proposes that the practical life of the church by and large presupposes a sort of flow chart which moves from beginning to end (from Father through the Son to the Spirit), whereas we need to " see the eschaton in God at least as clearly as we see in him the origin " (139) . In the course of a brilliant argument, Jenson suggests that this implies that "what our finitude, our location *on* the time line, means is not that past and future are not *there* for us, hut that they are not there in mutual peace" (145).

But this cannot be what our finitude *"means."* Finitude is our creatureliness, including temporal continuity and discontinuity. We temporal agents are created for the mutual peace of life with God. We sin and introduce a radically different sort of discontinuity into our lives, not the discontinuity of transitions from past to present to future but attempts to end the story (i.e., the crucifixion). Similarly, the key issue Jenson raises about the triune God is not how God relates past and future in an eternity of " pure duration " (p. 144, quoting Barth, though Jenson could as well have quoted Aquinas's *tota simul [ST* Ia. 10, 1] on this point). The issue of how the triune God *makes time for us* " in his own triune life " is distinct from the issue of how the triune God *reconciles our sin* in the same triune life. And so what we need is an account of the *eschatological* Spirit who is also *creator* Spirit, who can chastise the church while preserving us in truth.

I will end on this cryptic note, for I think that explicating this point would require engaging the many books and articles Jenson has written on this topic besides *Unbaptized God.* Jenson's book makes no pretence to be more than a modest theological contribution to the revolution we need if ecumenical theology is to move to its next stage. It is, I think, not only a superb summary of the current status of ecumenical dialogues but also a critique of any ecumenical theology which treats God as a ' settled ' issue. It is required reading for those in constructive theology, particularly those who might disagree.

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The Theology of Henri de Lubac: An Overview. By HANS URS VON
BALTHASAR. Translated by Joseph Fessio, S. J., Michael M.
Waldstein (Preface), and Susan Clements (Conclusion). San Fran·
cisco: Ignatius Press/Communio, 1991. Pp. 127. $9.95 (paper).

Except for the preface and conclusion, Hans Urs von Balthasar's
The Theology of Henri de Lubac first appeared as the long essay,
"Henri de Lubac-L'oeuvre organique d'une vie," in *Nouvelle Revue
Theologique* 97 (1975), 897-913 and 98 (1976), 33-59, and translated
by Joseph Fessio, S.J., as "The Achievement of Henri de Luhac" in
Thought 51 (1976), 7-49. The preface was added soon after for the
German edition, *Henri de Lubac: Sein organisches Lebenswerk* (Frei·
burg im Breisgau: Johannes Verlag, 1976). The conclusion was added
for Balthasar's and Jesuit Georges Chantraine's *Le Cardinal de Lubac:
L'Homme et son oeuvre* (Paris: Ed. Lethielleux, 1983).

While de Lubac denied " a true, personal philosophical or theo·
logical synthesis " in the multiplicity of his *oeuvre,* he did believe that
there could he found " a pattern that constitutes its unity " (de Luhac
on p. 10). A more systematic work had been planned with Bruno de
Solages, Peres Congar, Chenu, and others. In de Luhac's words, " the
lightning bolt of *Humani Generis* killed the project" (p. 11). We
can only wonder at what might have been.

At the center of de Lubac's thought is a spiritual perception of "the
essence of Christian mysticism" (p. 11). A hook on this subject was
planned hut never completed; its fundamental importance was indicated
by de Luhac in 1956: "I believe my hook on mysticism has inspired
me for a long time in everything I work on; in its light I make my
judgments and gain the criteria for ordering my thoughts and ideas"
(p. 11). The purpose of Balthasar's little book is to trace these "great
spiritual options of the master" (p. 26).

Balthasar wrote his preface after he had received from de Luhac the
manuscript that would he published as his *Memoire sur l'occasion de
mes ecrits* (1989; ET: *At the Service of the Church* (1993]). Accord·
ing to Balthasar, this "meandering" text has great value in display·
ing the organic unity of de Luhac's writings in the contexts which oc-
casioned them-" as well as the legendary condemnations and banish·
ments prepared for him by his order and by the Church" (p. 9).

De Luhac adopted the " fundamental elan " (p. 13) of Blondel,
Marechal, and Rousselot. They enabled de Lubac to see in Thomas
Aquinas " the paradox of the spiritual creature that is ordained beyond
itself by the innermost reality of its nature to a goal that is unreachable
for it and that can only he given as a gift of grace " (p. 13). Balthasar
is unambiguous in his belief in the correctness of their interpretation.

Blondel, Marechal, and de Lubac were " martyrs for truth " (p. 13) .
De Lubac " exposed himself to the attacks of a tutiorist scholastic
theology, armed with nothing but the historical and theological truth"
(p. 13). Of the three, de Lubac was the most persecuted.

   The conflict with scholasticism is presented in all its sharpness. One
must go back to Thomas himself, over the commentatorial tradition of
John of St. Thomas and Cajetan, whose work represents, in the words of
Gilson, " a successful ' *corruptorium Sanctae Thomae.'* ... Thomas has
been castrated by it" (p. 14). Gilson's "unqualified assent" to de
Lubac's Thomistic conclusions means much to Balthasar, because it is
"the assent of the greatest authority in the field of the history of phi·
losophy" (p. 15). Upon reading *Sumaturel* (1946), Gilson wrote to
de Lubac that the difference between the scholastic and the humanist
theologians, like de Lubac, in part lies in the way they understand
propositions. The scholastics " understand only univocal propositions
and those that seem to be univocal. The former [humanist theolo-
gians J, by contrast, are more interested in the truth that the proposi-
tion attempts to formulate and that partly escapes it" (p. 14). In their
incomprehension and fear of analogy, the scholastics are represented as
hankering after a security that does not exist.

   Chapter I, " Perspective," makes some general comments on de
Lubac's style and methodology. De Lubac's consistent "integral vi-
sion and decision" (p. 27) is for "genuine catholicity" (p. 25). In-
deed, " it is precisely the power of inclusion that becomes the chief
criterion of truth" (pp. 28-29). De Lubac favored the concrete, his-
torical thought of the Fathers and High Scholasticism and the symbolic
theology which is able to integrate the Church-Eucharist mystery. De
Lubac opposed rationalistic methods which separated nature and grace
and one-sidedly emphasized the real presence. The " professional, con-
vulsive constriction in theology" (p. 30), which resulted from the anti-
positions of the Counter-Reformation, has been immensely destructive;
indeed, theology's " individualistic aberrations " (de Lubac on p. 30)
might have influenced the spread of Marxist-Leninism.

   In order to retrieve catholicity, de Lubac generally draws from the
voices of the great tradition and makes his own opinions known
through them. In addition to citing acclaimed theologians, " it is char-
acteristic of him to choose other representatives of universal thought,
namely, the great among the vanquished who have fallen because of
the machinations of smaller minds or of a narrow Catholicism that is
politically rather than spiritually minded" (pp. 30-31). These voices
include Origen, Teilhard de Chardin (spared condemnation by the
Church because of de Lubac's numerous publications), Erasmus, Pico
della Mirandola, Fenelon (a planned work was not completed), Blonde!

("the greatest Catholic philosopher of modern France, a man tortured to the point of blood by reactionary theologians" [p. 32]), and Proudhon (who, despite his unruliness, "justifiably reacted against an intolerably narrow, reactionary, traditionalist Catholicism" [p. 23]).

Chapter II deals with the seminal importance of *Catholicisme* (1938; ET: *Catholicism* [1950]). Catholicism is intrinsically social, in its insistence on " the universal solidarity in what concerns the salvation of man" (p. 35), and historical. A number of significant themes of twentieth century theology find an early instance here: the Church as the "Sacrament of Christ in the world" (de Lubac on p. 36) the social aspect of the sacraments; the continuum of *communio* from creation to eternal life; the "theme of the maturation of the world through history" (p. 38) by means of the Covenants, as opposed to religions which individualistically evade history; the foundations for a theory of "anonymous Christians "-that grace "can produce effects even in deficient systems " (p. 39) ; indeed, the grace of Christ " is at work everywhere under a thousand anonymous forms " (de Lubac on p. 46) . Later, in " Les Peres de l'Eglise et les religions non-chretiennes " (1966; ET: "The Pagan Religions and the Fathers of the Church," in *The Church: Paradox and Mystery* [1969]), de Lubac distinguishes the idea of " anonymous Christians " from a theory of anonymous Christianity which would state the formal adequacy of non-Christian systems. Balthasar thinks that *Catholicisme's* universal-historical interpretation of the divine pedagogy anticipates Teilhard's vision and that its doctrine or the predestination of the Church, while remaining distinct from that *of apocatastasis,* anticipates Barth on predestination.

De Lubac's commitment to the method of immanence is evident in chapter III, " The Two Atheisms," i.e. of Buddhism and the modern West. The objective systems of Buddhism are sympathetically criticized on the basis of the incarnational realism of Christianity. Because of the formal lack of an I-Thou transcendent personalism, Eastern and Western atheism are shown ultimately to destroy the human person. " Only the self-revealing personal God guarantees the eternal worth of the human person" (p. 59).

Chapter IV, "The Newness of Christ," deals with de Lubac's fundamental theology, theology of history, and cosmology-eschatology. The unity of the divine plan for the world is illuminated in the problematic of nature-grace, the dialectic between the Old and New Covenant, and anthropogenesis through evolution and Christ-Omega. Particularly valuable is Balthasar's summary of *Surnaturel.* God's fundamental intention in creation is " to communicate himself as absolute love and to inscribe this wish *of his* in the innermost being of the spiritual creature, so that it recognizes therein the ' call of God to love ' and, instead

of making demands himself, stands by his very essence under God's demand inscribed in his nature " (p. 67). The nature-grace problem must be seen in terms of " the order of absolute love," where " only the law of selflessness is valid; categories such as ' rights, advantages, commutative justice' are quite out of place there" (p. 68). While the relevance of the nature-grace issue perdures, de Lubac himself thought that its terminology was properly yielding to more personal categories.

In the course of his summary of *Le mystere du surnaturel* (1965; ET: *The Mystery of the Supernatural* [1967]), Balthasar, by way of footnote, makes a rare criticism of de Lubac. Balthasar wonders " how de Lubac can logically distinguish three moments in the Creator's plan" (p. 72), where each level does not entail the subsequent one: 1) creation of spiritual being; 2) "the supernatural finality imprinted in its nature " (de Lubac on p. 72) ; 3) the free offer to participate in God's life. Balthasar suggests that level one and two coincide conceptually, and that *in ordine executionis* the unity of God's salvific freedom can only be conceptually analyzed in two moments.

Balthasar points out the correspondence between the relationship of the scriptural Covenants and that of nature-grace. Although the same Spirit inspires both Testaments, the nondeducible, disproportionate newness of Christ is stressed. Christianity is a religion of the Logos, " not written and mute, but the incarnate and Living Logos " (St. Bernard on p. 77) who takes body in Scripture and the Eucharist. "In the center stands Christ, who is both exegete and exegesis; he interprets himself and does so primarily in deeds, which are incarnate words " (p. 79). The origin of the spiritual hermeneutic is not an extra-biblical import but Paul himself. While de Lubac did not wish for a slavish return to the ancient hermeneutic, he certainly thought that its synthetic and spiritual methodology and form were worthy of emulation. The Patristic and Medieval schemata " form the unfolding of the inner fullness of the mystery of Christ " (p. 78), and seek out " the most profound articulations of salvation history" (p. 76).

Balthasar shows how de Lubac's understanding of the *desiderium naturale* is coordinated with Teilhard's vision: the entire universe is " essentially a longing and transcendence by virtue of the ordination to a transcendent, uniquely fulfilling principle" (p. 88). The dogma of Chalcedon gives " humanity the way out of the dead ends of evolution" (p. 89). Furthermore, part of Teilhard's significance for de Lubac was that he proposed a personalistic mysticism of the West as an alternative to the nonpersonal mysticisms of the East and Western atheism.

Chapter V, " Creature and Paradox," presents the more directly personal thought of *Paradoxes* (1946), *Nouveaux Paradoxes* (1955)

(ET: *Paradoxes of Faith* [1987]) and *Surles chemins de Dieu* (1956; ET: *The Discovery of God* [1960]). The proximity to and Blonde! is apparent. Balthasar wonderfully summarizes de Lubac's anthropology as " the dynamism of the ' restless heart ' ineradicably present deep within, of that ' habitual ' longing for the absolute that ' breathes ' in the soul, preceding every act of thinking and willing, without, however, being an (' ontological') vision of absolute being, but ever under the necessity of expressing itself in rational notions and concepts, conclusions, modes of proof, and systems, in order to make its antecedently given content clear to itself reflexively, although it can never exhaust or embrace this content in these unavoidable forms " (p. 93) . Thus is established the necessity of negative theology; the reduction of the living awareness of God into logic and positivism is rejected in favor of the already present *eminentia* of the *via negationis.* We see now the importance of paradox as a thought-form in its ability to point beyond itself to the signified mystery. Ultimately, the "primordial phenomenon can only be interpreted personally: Being is the other . . . He must reveal himself for man to have a participation in him; only the God of the Bible-over against all the gods of philosophy and religion-is the living God" (p. 97). Hence, the importance of the witness of the saint, who touches the human center, the *desiderium naturale Dei,* bringing into the light the need for adoration.

The centrality of the Church in de Lubac's later work is dealt with in Chapter VI. Balthasar admits that the Church is the real center of de Lubac's whole life's work, " the meeting point of God's descending world and man's world ascending to him " (p. 105). *Meditation sur l'Eglise* (1953 ET: *The Splendour of the Church* [1956] moves toward the Council in great strides; it presents a sacramental ecclesiology which is at its heart eucharistic-the Church produces the eucharist and is produced by the eucharist. De Lubac holds together the paradoxical complementarities of ecclesiology-e.g., " social work and adoration go hand in hand" (p. 109). Indeed, the paradoxical nature of the Church points beyond conceptualizations to the mystery which she is. *Les Eglises particulieres dans l'Eglise universelle* (1971; ET: *The Motherhood of the Church* [1982] warns against the depersonalization of the Church into a bureauracy of the episcopacy. In its second part on the maternity of the Church and the paternity of her ministers, " the Church is presented as the only sanctuary of persons and personal values in today's anonymous mass society" (p. 115).

I find Balthasar's inclusion of *La Foi chretienne* (1970; ET: *The Christian Faith* [1986]) and *Pie de la Mirandole* (1974) in this section on the Church a little forced. Nevertheless, *La Foi chretienne* is concerned with how the *oikonomia* of the Trinity is accessible only

through an ecclesial faith.   Faith "into God," as a response to God's
self-gift, "brings to its essential perfection the primordial movement
of natural' religion,' of the' *desiderium naturale'"* (p. 116).

Balthasar's conclusion was added in the 1983 *Le Cardinal de Lubac:
L'Homme et son ouevre* after the publication of the two large volumes,
amounting to some 1000 pages, of *La posterite spirituelle de Joachim
de Flore* (1979, 1981).   This chapter is a paean to Balthasar's then
" eighty-year-old master."   With de Lubac's characteristic breadth of
intellectual scope, *La posterite spirituelle* traces the spiritual influence
of the Calabrian Abbot through Bonaventure, Thomas, Cabalism,
Campanella, Boehme, the " Rose-Croix," Pietism, the Enlightenment,
Lessing, Herder, Idealism, Saint-Simon, Michelet, Lamennais, Buchez,
Georges Sand, Mickiewicz, Marx, Hitler, Tchaadaev, Dostoevsky, Solo-
viev, Berdiaev, Bloch, Moltmann, etc., etc.   De Lubac's unparalleled
scholarly imagination exercises here its " magisterial art for the dis-
cernment of spirits " (p. 125) .   At the center of this discernment is the
Church, which, from *Catholicisme* to *La posterite spirituelle,* coincides
with the self-transcendence of salvation history-rendering   the sur-
passing of the Church by a reign of the Spirit superfluous.

Throughout *The Theology of Henri de Lubac,* Balthasar depicts de
Lubac as that rare type of man who realized the meaning of catholicity.
De Lubac is of significance to the Church because he points the way
to greater openness of spirit," to a spiritual independence and instinct
for the universal, and to a wisdom which knows " that all concepts and
systems are indeed indispensable but limited; that their construction
is due to a deeper force that also strives farther and beyond them. . . .
to the greatest peace, that of all things being together in God " (p.
119-120).

This is clearly the book of a disciple.   But whether or not one is a
disciple, *The Theology of Henri de Lubac* is the best introduction to
de Lubac's thought available;   it faithfully and accurately brings out
the structure and controversial edge of de Lubac's thought.   This re-
viewer would hope that its publication would renew scholarly *quaestio*
and *disputatio dialectica* on Henri de Lubac's influential theology, espe-
cially since it stands in a complex relationship to major approaches of
twentieth century Catholic theology-namely,   Thomism, the transcen-
dental thought of Rahner and Lonergan, and the theological aesthetics
of the book's author, Hans Urs von Balthasar.

Fr. Fessio's translation unfortunately has not received needed cor-
rections since its first appearance in 1976 in *Thought.*   For example,
" an eminently successful attempt to present the spirit of Catholic Chris-
tianity to contemporary man in such a way that he appears credible in
himself and his historical development ... " (p. 24) should read "to

present the spirit of Catholic Christianity to contemporary man in such a way that *it* [Catholic Christianity, not contemporary man!] appears credible in *itself* and *its* historical development ... " (emph. mine). Clearly, de Lubac's entire theology is an effort to say the opposite of what the mistranslation regrettably says. Page 46: "his articles, however, which from 1972 [typographical correction: 1942] on prepared for his works on modern atheism (1944/1945) ... " On pages 80 and 115, the word "mysterial" is introduced; it should be "mystical." On page 94-95, "the strict rejection of all reduction of God's living consciousness [correction: the living consciousness of God] to logical categories" is misleading because Balthasar is referring to *man's* living consciousness of God. Page 101: " We experience what a true theology [correction: theologian] is for de Lubac ... " On the same page there are two typographical errors, adding a parenthesis and omitting quotation marks. Abbe Monchanin' s *De l'esthetique a la mystique (From Aesthetics to Mysticism)* is mistranslated as *From Asceticism to Mysticism* on page 102. This 1991 edition translates Henri de Lubac's name for the first and only time as " Henry de Lubac" on page 118. Michael Waldstein's and Susan Clement's translations are fine and readable.

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Hans Urs von Balthasar. His Life and Work. Edited by DAVID L. SCHINDLER. San Francisco: Communio Books/Ignatius Press, 1991. Pp. 305.

This is an important contribution to English-language scholarship on the Swiss theologian Hans Urs von Balthasar. As such it marks a nice complement to the volume edited by John Riches, *The Analogy of Beauty: The Theology of Hans Urs von Balthasar* (Edinburgh: T. & T. Clark, 1986). Schindler's volume is a slightly edited translation of *Hans Urs von Balthasar: Gestalt und Werke,* edited by Karl Lehmann and Walter Kasper (Cologne: Communio, 1989). Most of the articles appeared in one or more of the many editions of *Communio International Catholic Review,* the periodical founded by Balthasar.

The richness of the volume lies not only in the quality of individual selections but in the range of material that is covered. Many areas of Balthasar's life and work have remained little known, especially in the English-speaking world, until the appearance of this volume. The pur-

pose of the book, according to Schindler's preface, is "to help display [Balthasar's]   vision and the character and range of his service to the Church and to culture" (p. xiii).

   There are several essays in the volume which shed new light on Balthasar's life, as well as on his philosophical position. Peter Henrici's lengthy biographical sketch is the most complete such contribution available until now, even though he calls it "preliminary   and inade- quate" (p. 7). It is extremely useful, in conjunction with Balthasar's own autobiographical statements, to situate the written work in the con- text of a large mission in the Church. It is also helpful in clarifying the relationship between Balthasar and the Jesuit order: his entry into the Society of Jesus, his studies, his departure from the Jesuits, and the attempted reconciliation with them shortly before his death. The extent of his health problems, also, only underlines the value of his literary production.   Many details concerning the meeting with Adrienne von Speyr and the founding of the secular institute *Johannesgemeinschaft* are also provided.   Throughout these activities and the writings that surround them, "the issue is the Church in the world, not a radiat- ing of the Church's holiness into the profane world, but the leavening of the world from within in order to make visible God's glory which still shines in this world" (p. 24).

   Henrici has another essay in the collection on the philosophy of Balthasar.   This is a little explored area of Balthasar's writings and Henrici's contribution is especially valuable. By clarifying Balthasar's position in relation to key figures in the history of philosophy, it pro- vides many significant hints to facilitate the integration of Balthasar's theology within the academic milieu. Balthasar reflected on the possi- bilities of an encounter between Catholic theology and modern thought. By the latter he meant *Lebensphilosophie,* existentialism,   and " the modern spirit of history."   The presuppositions for a "mutually fruit- ful encounter " are located in " the scholastic doctrine of the tran- scendentals and in the real distinction between existence and essence " (p. 151). The reader is also to view, from Balthasar's own view- point, the figures of Plato, Plotinus, and Hegel, and especially the op- posing pair of Kierkegaard and Nietzsche. It is here that the dialogic nature of Balthasar's position stands out most clearly, "as an all-en- compassing and all-decisive category" and "forming principle *(Form- prinzip)* of the trilogy" (p. 161). The theme of the identity of being with love is rightly given the central place in this treatment. Balthasar's philosophy is a metaphysics of love, pointing to and, ultimately, ordered to, a theology of love. The " simple and impressive form *(Gestalt)"* of Balthasar's thought becomes visible only " when we suc- ceed in seeing being as love--both as the poverty of eros and as self-

less gift of self " (p. 167). Being is intelligible only as love. This is why, Henrici correctly points out, the center of his trilogy is not the Aesthetics (the only part of the trilogy whose English translation is at present complete) but the Dramatics.

Further contributions on lesser known areas of Balthasar's thought come from Alois M. Haas's useful account of Balthasar's early work " Apocalypse of the German Soul " and Charles Kannengiesser's "List· ening to the Fathers," an overview of Balthasar's contribution to the field of patristics.

Johann Roten ("The Two Halves of the Moon: Marian Anthropological Dimensions in the Common Mission of Adrienne von Speyr and Hans Urs von Balthasar ") has contributed a very useful piece on the relationship with von Speyr. Balthasar has repeatedly stressed the importance of this relationship, and an adequate statement of this relationship has until now been lacking. There is an embarrassment or a feeling of unease on the part of the theologian when dealing with this issue which is often due to a lack of appropriate categories of understanding. The result is a serious difficulty in the reception of his work. There is either an outright dismissal of Balthasar as a whole, or, more often, a reductive reading of his work (i.e., Balthasar as "theologian of beauty" or as "contemplative theologian"). Roten writes about a " psychological and theological symbiosis " between Balthasar and Adrienne von Speyr. This is the experiential basis of his theology. The emphasis is clearly on the " double mission " which focuses first on the Community of St. John, the institute founded with Adrienne von Speyr, secondly on the work associated with the books of von Speyr (over sixty volumes), and only thirdly upon the theological work of Balthasar. The " double mission " of Balthasar is important for many reasons, but one of the most obvious and pertinent is the complementarity of the sexes in the Church. Roten has some useful remarks on this also. Roten's essay is well complemented and made somewhat more concrete in Maximilian Greiner's interview with two of the orig· inal members of the Community of St. John.

Wolfgang Treitler's article on "The True Foundations of Authentic Theology" will relate to the North American interest in theological foundations. Theology, as any other science, unfolds authentically to the extent that it " receives its form entirely from the content that molds it." For Balthasar, this refers to the foundational concept of catalogy which expresses " the awareness of a theological methodology that God's self-expression in the incarnate Son can only be read truly from above downward as a formed process of following the divine *kenosis* in theological re-flection *(Nach-Denken)"* (p. 171). No matter how learned or sophisticated, theology for Balthasar can never be sepa·

rated from the question of mission in the Holy Spirit. Catalogic ana·
logy is then " the linguistic expression of the *condescensio* into which
the individual is taken " (p. 181) .

Louis Dupre's critical summary of the seven volume *Glory of the Lord*
is one of the most lucid accounts of the first part of Balthasar's trilogy.
Dupre uncovers the " simple idea " at the center of Balthasar's enter-
prise: "By assuming human nature God transformed the very mean-
ing of culture. Henceforth all forms have to be measured by the su-
preme form of the Incarnation " (p. 184) . The resulting theological
aesthetics is not based on the previous tradition which has developed
from Plato to Heidegger, but is based on an " analogous order that
[...] established its own laws from above" (p. 186). Here, the suf-
fering and death of Christ are no longer the exception they would be
in a worldly aesthetic but become the model. The cross thus belongs
"to the very essence of divine form" (p. 187). Now, this *analogia
crucis* from above requires an *analogia entis* from below so that the
world is seen as manifesting God's presence. Dupre notes that in
"modern culture this has become exceedingly difficult" (p. 187). Fol-
lowing Balthasar's lengthy history of western metaphysics, he traces the
fate of metaphysical reflection and remarks: "Where Being lost its
mystery the cosmos allowed no more genuine divine immanence" (p.
190). Philosophy became a "titanic human construction" (p. 190).
Through its different " styles," it is the witness of theology to the form
of Christ that provides the principle for a theological aesthetics. And
here, the conditions of possibility for knowing this form " theologically "
are the very same that constitute this "theological" object, but, Dupre
adds, " with this important restriction that the object itself provides the
conditions for its knowledge " (p. 197). Faith does not stand opposed
to experience, but "creates its own experience" (p. 198).

Noting in conclusion that Balthasar avoided the pitfalls of both "in·
tegrist rigidity " and " aesthetic constructivism," Dupre finds that
" Balthasar's work concludes a theological epoch of the Catholic
Church" (p. 204). In conjunction with some remarks on the founda-
tions of Scripture, he notes that Balthasar's insistence on the clarity of
the Christian form leads him " to paint the contrasts [with other reli-
gious forms] in rather harsh tones" (p. 203). He finds Balthasar's
hard judgment of other religions " unnecessary for preserving the form
of Christian faith " (p. 203) . And he suggests, in this connection, that
Balthasar does not sufficiently appreciate " the truth in negative the-
ology" (p. 204). Still, Dupre's remarks on Balthasar's harsh judg-
ments on other religious expressions must be read alongside Christoph
Schonborn's essay on Balthasar's "Contribution to Ecumenism" where
it is argued that it is precisely his devotion to the *Catholica* which can
allow for dialogue.

John O'Donnell provides an overview of Balthasar's theological vision focussing on the form of this theology. In contrast with Rahner's transcendental starting point of the subject and his question, Balthasar's starting principle is found in dialogue whose paradigm is the child awakening to self-consciousness through the smile of its mother. This principle, according to Balthasar, finds its fulfillment only within a Trinitarian context which sees Christ's death on the cross as the form of God's love for the world. As *Geistessubjekt,* the individual is given intellect and will. But he becomes person " only in the concrete, unpredictable mission which he receives from God," that is, " only through the dialogical relation" (p. 219). O'Donnell continues: "Responding to that love [of Christ], in faith and obedience, to a mission planned for no one else who ever was or will be, the person discovers the meaning of his freedom, a freedom which in the response becomes concrete and informed, thus enabling him to verify in his own experience the truth that Being is love " (p. 220) .

Ellero Babini develops these ideas further in his contribution "Jesus Christ: Form and Norm of Man according to HUvB." He locates the normative role of Christology in relation to anthropology around three key categories: mission, substitution, and singularity. It is in the obedient reception of his unique mission that the human person enters " into a living, existential co-involvement in the universal, dramatic event of which the protagonist is Christ, and the backdrop is heaven and earth, history and eternity " (p. 223) . Again, human subjectivity is not absolute, but derivative and analogous with respect to Christ, the singular and unique subject of the theo-drama (cf. p. 228) .

Placing these concerns into an even more concrete framework, Marc Ouellet reflects on the "Foundation of Christian Ethics." Once again we return to the centrality of Christ who is the concrete and personal norm of ethics. His obedience in the substitution of the cross both expiates sin and frees the sinner " for the sake of a liberating mission " (p. 235). We are not constituted as persons *a priori,* but only *a posteriori;* we become persons in Christ through the determination of the mission given to us. In this sense, ethics will be concerned with "the insertion of human liberty, fallen but not destroyed, into God's engagement, that is, into the Christ sent into the World " (p. 243) . Hence the theo-dramatic character of ethics. Ouellet is particularly good in showing how this character corresponds to contemporary problems in theology.

The relationship between theology and spirituality, or better between theology and holiness, is a fundamental theme in the work of Balthasar and it is also an important theme throughout the present book. It arises in the context of the twofold mission with Adrienne von Speyr, as well as in several other contexts. Werner Loser writes on " The Ignatian

Exercises in the Work of HUvB," Antonio Sicari writes on "Theology and Holiness," and Georges Chantraine writes on the relationship of "Exegesis and Contemplation."

   Missing from Henrici's account of Balthasar's philosophical presup·positions, as well as from the other contributions, are further sugges·tions for exploring possible relationships with some of the current con·cerns in North America like the hermeneutical debates or those sur-rounding other methodological issues. Much work is still needed in this area, especially a more thorough encounter between the position of Balthasar and those of Karl Rahner, Bernard Lonergan, and Paul Ricoeur, to name but a few of the dominant figures in North American theological circles. Schindler's volume is highly to be praised as an invaluable introduction to the work of one of the giants of our century. Let us hope that more such studies will be forthcoming.

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The Anthropological Character of Theology: Conditioning Theological Understanding. By DAVID A. PAILIN. New York: Cambridge Uni·versity Press, 1990. Pp. 300. $54.95 (cloth) .

   That the discipline of theology is an activity of human beings whereby even in the most pronounced theologies of revelation the " creaturely form" of theology is acknowledged is not a matter of dispute. What is debated is the extent to which this Barthian render-ing of the anthropological moment of theology " conditions " our theo-logical understanding. It is in the interests of sorting this out that David Pailin, Reader in the Philosophy of Religion at the University of Manchester in England, devotes this volume. The result is a rather systematic study in which the author explores the various angles where one can register theology's human dimension-from basic theistic claims to doctrinal formulations-while simultaneously justifying the integrity of theological inquiry in philosophical perspective. Indeed, throughout, it is the hand of a philosopher of religion that is at work, synthesizing and categorizing the contemporary theological landscape and carving out the true subject matter of theology, namely, that which is "ontologically,   valuatively and rationally ultimate" (p. 4).

   The book is best read with an eye to each of these poles. On the one hand, the ostensible project is to examine, evaluate, and clearly affirm the human character of the theological enterprise. Simply

acknowledging the theological identification of human being, *ergo* the theologian, as a creature addressed by the divine word is inadequate. Even if this should require the practitioner to engage in a " laborious movement from one partial human insight to another" (Karl Barth, *Church Dogmatics,* I, 1, p. 14), it does not give due recognition to the formative influence exercised by the theologian's fallible and culturally specific situation in life. These include language, conceptual perspective, metaphysical commitments, social location, and religious experience.

On the other hand, Pailin is mindful that attention to theology's anthropological character and his methodological accentuation of it is in danger of yielding to the reductionist charge that religion is a complex of human projection and anthropomorphic description. In response Pailin consistently argues the case for the justifiability of religious belief, theistic claims, and theological predication. In this respect his work is not only descriptive of what theologians are doing but it attempts a revisionary intervention in the realms of philosophical and systematic theology. Classical theistic renditions of the divine attributes are subjected to critical scrutiny, e.g., divine impassibility and its relationship to divine love, and traditional interpretations of Christian doctrines are relativized by their cultural context, e.g., Anselm's theory of atonement. His own constructive subtext betrays a clear preference for neo-classical process theology and its conceptualization of God's relationship to the world and history.

The key issue that governs Pailin's view of the integrity and limits of theological understanding revolves around the relationship between formal and material predication. What we mean by God and what we say about God are inextricably bound up with our speculative efforts to understand the nature of ultimate reality. The theologian and the metaphysician are in pursuit of similar quests with the proviso that the farmer's judgments are ensconced within a religious perspective. This does not exempt theological judgments from being rationally coherent. Pailin therefore begins by constructing a speculative foundation for theistic belief and in the process takes on one of the most powerful critiques of religious theism.

Again, it was Karl Barth who more than any other theologian of the early twentieth century recognized the prescience of Ludwig Feuerbach's charge that "theology is anthropology." This led Barth to a theology of the " wholly other " mediated solely by revelation as a counter to Feuerbach; a strategy that implicitly appreciates Feuerbach's contribution to the undoing of the liberal theological paradigm based on religious experience. Pailin similarly recognizes the importance of Feuerbach but subverts the charge by agreeing to its truth. Dismissing Barth's appeal to self-authenticating revelation as credulous,

Pailin builds his case that " the concept of God found in faith and
theology is in many respects . . . derived from a projection of human
nature" (p. 34). If this is not exactly a dogmatic rejoinder (in the
best sense of that theological discipline) to "Feuerbach's impertinent
theology of identity" (Barth's phrase from his introductory essay to
Feuerbach's *The Essence of Christianity,* p. xxx), it is at the very least
an innovative response and one that Pailin admirably follows through
on.

   Underlying Pailin's argument is his forthright admission that our
language about God is " inescapably conditioned by our humanity"
and is in the first place more a matter of " our modes of understanding "
than of our religious experience (p. 35) . Religious experience, and for
that matter, apprehension of revelation and our soteriological needs,
are equally conditioned by our humanity and its particular cultural ex-
pression. However, at best, they only indirectly implicate what we can
say of and about God. The path to theological predication in these
three areas, which in good measure concern its material content, pre-
supposes formal recognition of the concept of God. This marks the
decisive turn in the conversation with Feuerbach; one starts with him
but does not end with him.

   The conditioning of theology by anthropology differs from the re-
duction of theology to anthropology. Anthropologically conditioned
predicates about God include what Pailin identifies as " extra-predi-
cates " or " qualifying terms " or " operators " which distinguish the
" material (and anthropomorphic) language of God " from a merely
human referent. Formally, these terms (similar to the medieval debate
on analogy) refer to God on the basis that the very concept of God
concerns that which is intrinsically ultimate. Contrary to some current
theological positions Pailin contends that God-language, properly un-
derstood, does intend a mind-independent reality, something ontologi-
cally distinct from the human. Even though theistic faith cannot be
extracted from " human ideals, goals and desires " (p. 50)-hence
Feuerbach's basic insight-coherent God-talk at both the popular and
theoretical levels implicates a prior ontological and ultimate ground for
such.

   This is certainly true for the language of prayer, praise, and adora·
tion which registers the intent of what most believers think they are
doing when they engage in these activities, i.e., directing their atten-
tion to that which is religiously worshipful. Indeed it may be that in
the act of worship one's human situation is disclosed in a new way,
but only because reference is made to the other. This is borne out at
the speculative level as well. Here Pailin turns to Kant and moves be-
yond him. He invokes the notion of theological statements as " regula-
tive ideas," i.e., as the ground and limit of human understanding. The

requirement is to correlate the concept of God, thus understood, with the utilization of God-talk in the investigation of the ultimate nature of reality.

The scope of Pailin's speculative case is appropriately modest, fully respecting the limits of human understanding and never attempting to circumvent the anthropological conditioning of theological statements. For all his respect for Anselm, he maintains that one cannot argue from the concept to the existence of God, but he does utilize the Anselmian notion (with help from Hartshorne) that thought about God as that which is necessarily ultimate and perfect requires that the " divine existence cannot be limited in practice or in principle by anything prior or superior to Godself" (p. 56). Herein is the foundation for the concept of God which functions as "the end-point of all appropriate forms of understanding " (p. 65) , including judgments made about the cohesiveness, meaning, value, and truthfulness of the universe and human life.

Such judgments elevated to the level of principles are not self-evident in themselves and certainly not absolute-hence the modesty of their human conditioning. But they do point to the ultimacy of the concept of God and in that respect " the content of that concept . . . is also conditioned by what we regard as the proper limits of understanding." Pailin's choice of metaphor is telling: "the concept of God represents the bedrock where the spade of understanding is turned" (p. 69)-a foundation for theistic claims beyond foundationalism? Perhaps! But only to the extent that we recognize a certain oddity in the language about God. The regulative aspect of God-talk involves language and predication about that which is " beyond direct experience, it involves indirect modes of description" (p. 78). One is never able to escape the limits of human contingency in our attempts at theological under-standing. Nevertheless, Pailin maintains that a realist referent to the regulative function of the concept of God, i.e., that it implicates an actual entity rather than the expression of an ideal, is the more con-vincing and consistent argument. Although this is not a justifiable proof that God exists it does underscore the basic reasonableness of faith.

By this time it is clear that the relationships between theology, so conceived, and religious experience and revelation are cautious and qualified. Both are subject to the intensification of their relativity due to cultural conditioning. This does not mean that they are of no value. Rather one must effectively locate their cognitive import for theological understanding. In and of themselves they do not provide the linchpin for a theological claim. Pailin suggests a reciprocity between previous-ly held theological understandings and experiences of God and/or the

apprehension of revelation. In the case of the former they best func-
tion as correlative or confirmatory experiences to theological under·
standing with the distinct possibility that they may also contribute to
their revision.

Regarding revelation the situation is somewhat more complicated.
Cultural conditioning, both in the revelatory texts and the interpretor
and application, whether doctrinal or practical, serves to limit claims
of direct disclosure by God. It is in the realm of the credibility of theo-
logical understanding that the import of revelatory insights may be
evaluated. This is best illustrated in his chapter devoted to the salvific
understanding of God based upon human need. Here the reciprocal
relationship between the soteriological aspirations of the human con-
dition, which could not be more diverse (and subject to illusion), and
the assumed benevolence of God toward humanity could not be greater.
Pailin demonstrates the theological tenability of his position by ad-
mitting the theistically appropriate coincidence " between the meta-
physical aspect of theology as an *understanding* of the truth about
ultimate reality, and its religious aspect as having to do with *faith*
and *hope* by which people may live " (pp. 158-59) . Yet he also argues
that in this incidence of the relationship between the formal and mate-
rial aspects of the concept of God it is the formal dimension that is
primary. It only is ultimate and regulative--harking back to Anselm's
"that than which nothing greater cannot be conceived," not as a proof
for God's existence but as a formal concept for the intrinsic ultimacy
of reference to God.

In the end Pailin manages to garner enough support from his
formal construct of theological understanding to recover a very tradi-
tional notion of the place of theology among the disciplines. As long
as one is able to recognize the anthropological conditioning and cultural
relativities that are constitutive of theology's relationship to the sci-
ences and the humanities, one can still venture an entirely proper de-
scription of theology as " the queen of the sciences! " The " concept of
God as the ground of the meaning and unity of reality " and its cor-
responding function as " the integrating apex of all valid ways of un-
derstanding reality" (p. 169) provide the formal ground for the genera-
tion of the material content of theological activity. That such activity is
always conditioned by the diversity and complexity of its anthropologi-
cal character only accentuates the possibilities for the richness of theo-
logical understanding. To this degree Pailin's book is a welcomed
contribution to the field and will be of great benefit to those engaged in
the disciplines of philosophical and fundamental theology.

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Born Before All Time: The Dispute over Christ's Origin. By KARL·
    JosEF KUSCHEL. Translated by John Bowden, with a Foreword by
    Hans Kiing. New York: Crossroad, 1992. Pp. 664. $50.00 (cloth).

The question of the pre-existence of Christ is crucial for Kuschel
(Professor of theological aesthetics and ecumenical theology at Tiib-
ingen) because it reflects the perennial human attempt to ask " about
the beginning of all beginnings, about the foundation of all founda-
tions, about the origin of all origins" (22). This substantial and
erudite work on the theology of pre-existence is an attempt to " make
a critical re-examination of the dogmatic statements of faith in the light
of biblical knowledge " (33) by narrating " the history of the redis-
covery of the pre-existence of Christ as a ' problem ' which is reflected
in the theology of the twentieth century" (31).

The narration takes place in three stages. *Part I* (140 pp.) is con-
cerned with those three thinkers who Kuschel believes set the para-
meters for the contemporary discussions on pre-existence: Harnack,
Barth, and Bultmann. He writes that the gulf between critical biblical
exegesis and dogmatics which has plagued post-Enlightenment theology
is reflected in the positions of these men: the conflict between them was
essentially one between history (Harnack), exegesis (Bultmann), and
dogmatics (Barth). As a result of penetrating analyses of their the-
ologies (and of their cultural/political/social contexts), Kuschel con-
cludes by noting (1) what they had in common, (2) how they differed,
and (3) their lasting contributions to contemporary theology. It would
be well to summarize the first and third, as they are particularly crucial
to the argument of the rest of the book. Each of these men shared the
common conviction that the early Church (especially Paul and John)
had taken over a mythological understanding of pre-existence from a
hellenistic-syncretistic religious milieu (Harnack understood this as
bad, Bultmann as good, Barth as irrelevant). *(Part II* of the present
work is a careful attempt to demonstrate that this was emphatically
not the case, but that the (few) pre-existence statements in the New
Testament were in the tradition of Hellenistic Judaism (particularly
the Wisdom tradition), that they did not imply a 'high' christology,
and that they were essentially eschatological and soteriological in char-
acter) . Concerning their lasting theological contributions, Kuschel
thinks that we have learned from Harnack the truth that " the history
of the idea of pre-existence [is] its own criticism" and that "the mess-
age of Jesus himself and the original proclamation of Jesus as the
Christ remain the critical standard for later dogmatic statements "

(487). Barth teaches us that " christology has decisive priority over anthropology " (487), and that time and history themselves must he rethought in Christological terms. Finally, and perhaps most importantly for Kuschel, we learn from Bultmann that " there can be no christology without demythologizing, no talk of the ' eternal Christ ' without seeing through the opportunities and dangers of mythical talk; no christology without existential, soteriological relevance " (488) . Harnack and Bultmann especially will wield decisive influence on Kuschel's own position as he elaborates it in the Epilogue.

Part II (220 pp.) begins with a remark of Ernst Fuchs which very much reflects the author's own attitude toward the relationship of exegesis to dogma: **"'If** there were no biblical text, Barth's outline would be preferable'"   (179). Kuschel has several purposes in this section: to demonstrate in detail how wrong Harnack, Barth, and Bultmann were in their understandings of the biblical notion of pre·existence, and to develop a firm and critical exegetical basis for systematic discussions of pre-existence. In fulfilling these aims, he considers all of the relevant Old and New Testament texts in chronological order, and stresses (as he also did in *Part I)* the "political, psychological and sociological " contexts of the biblical writings (180) . Indeed, one of his major theses is that the genuine pre-existence statements of the New Testament are put forward in response to very particular social, political, and religious crises. They emerge, he feels, only " when human trust in reason, wisdom, and the ordering of the world begins to crumble," and that they are both " indication of a crisis " and " instruments for overcoming crises " (205) . As a result of his detailed exegesis of the non-Johannine New Testament texts, he concludes that there is no notion of ' real ' pre-existence (as distinct from ' ideal ' pre-existence-predestination   or election) in the authentic letters of Paul (with the sole exception of the pre-Pauline hymn in Philippians 2, from which Paul distanced himself in various ways), in Ephesians, and in I Peter. Kuschel does see real pre-existence in terms of mediation at creation in the first chapter of both Colossians and Hebrews, al· though its function is eschatological and soteriological rather than protological (362-3) . The Gospel of John also, he concedes, contains a (largely demythologized) pre-existence christology whose object is soteriological (383) ; all pre-existence statements in John are expressions of his " sending " and " revelation " christologies, rather than of a properly protological interest in " the metaphysical nature and being of the pre-existent Christ" (389). Indeed, John never "deifies" Christ, never claims that he is God (387). In summary, Kuschel believes that the New Testament writers had little interest in pre-existence and, where pre-existence statements do emerge, they are toned down or

demythologized by a stress on the cross. In all cases they are escha·
tological statements that have a "completely   retrospective character,"
and hence are secondary theological conclusions, rather than " direct "
revelation (492).   And in no way do they reflect "eternal self-distinc·
tion " in God (438), or a pre-existent relationship of the Son to the
Father (421, 448).   The pre-existence of Christ only became a meta-
physical problem when the "deep experiences" of the New Testament
were intellectualized by Justin and the Greek philosophical tradition
(393), and were once again, as it were, 're-mythologized'   (this re-
viewer's term) as referring to pre-existent and heavenly mythological
persons and events. In his concluding remarks to *Part II,* Kuschel
states that the very expression " pre-existence " is a problematic, non·
biblical term that is too easily and often foisted on the New Testament,
fixing " in terms of both content and language what . . . is still fluid "
(394).   Positively, statements of pre-existence in the New Testament
seek " to make comprehensible the historical depth and universal
significance of the ' event of Jesus ' " (493-4) , and to assure that " God
determines himself to he present to us in this Son " (454) .

   Part III (86 pp.) is Kuschel's response to the question of how pres·
ent-day systematic theology is dealing with the findings of critical
exegesis in regard to pre-existence. He begins this section by once
again acknowledging the " deep hiatus between the biblical evidence
and classical dogmatics" (399), in which the doctrine of the immanent
" Trinity is developed independently of christology " (400) . The
author first examines the christologies of Pannenberg and Rahner in an
attempt to display the " revolution " in both contemporary Protestant
and Catholic theology after Barth-a revolution that consists in the
recognition of the problems with " classical christology" and the new
attempts to solve them (424) . Although Kuschel finds much to com·
mend in the positions of these thinkers, he faults Pannenherg for bring·
ing Barth's " metaphysical duality of Father and Son " through the
" hack door " of the resurrection (408) , and Rahner for his failure to
devolop a truly biblical christology (421). He next delineates four
areas in which he perceives growing ecumenical consensus: **(1)** a
cluster of problems with " classical christology "; (2) the " biblical
Christ," in contradistinction to the metaphysical Sonship or historical
reconstruction, as christological starting point; (3) the significance of
Jesus' relationship with the Father; and (4) the significance of the
resurrection as the "self-definition of God" (424-30). Kuschel then
examines the two different manners in which contemporary theologians
approach the question of pre-existence, given their agreement in these
four areas. On the one hand, Jiingel and Moltmann argue that the
presupposition of pre-existence is an eternal distinction within the **God·**

head itself (432); on the other, Kasper, Küng, and Schillebeeckx main·
tain that pre-existence statements must be interpreted historically, as
ways of expressing " the underivability and universal significance of
Jesus" (454).   Fairly long analyses of these five christologies demon·
strate the importance of the contemporary christological revolution, but
also argue against Moltmann's lack of exegetical foundation for his
Trinitarian development (444), Jüngel's intensification of the "gulf
between exegesis and dogmatics " (440), Kasper's lack of scriptural
bases for his development of eternal distinctions in God as a " trans·
cendental theological condition " of incarnation (459) , and Schille-
beeckx's abandonment of the biblical approach in *Part IV* of *Jesus*
when he talks about the " hypostatic identification " of the eternal
Word with Jesus' "personal-cum-human mode of being" (475-6).

    In the *Epilogue* (49 pp.) Kuschel summarizes his own understand-
of pre-existence statements: at root they point to the fact that " the
person, cause, and fate of Jesus Christ belong definitively to the deter-
mination of the eternal being of God" (495).   Because" in the person
of the crucified and risen Jesus the eternal being of God himself is ex-
pressed, the " person of Jesus Christ is necessarily a factor in deter·
mining God's nature" (496) ; Jesus is for this reason "definitively
God's revelation, Logos, Word " (494).   What Kuschel is at pains to
reject is any understanding of .pre-existence (an "unfortunate theol-
ogical coinage") that- splits Jes'ils. Christ into two phases-" first the
' eternal Son ' and then the ' temporal Son ' " (496) , any understand·
ing that passes " over the figure of the historical Jesus " (493) in an
attempt to "deify Jesus of Nazareth, to turn him into a mythical or
semi-mythical being " (493), any "speculation about an eternal Son
of God in himself, independent of the man Jesus" (453).

    Kuschel emphasizes throughout that the so-called pre-existence state·
ments in the New Testament possess a hymnic and poetic rather than
a speculative character, and that this form was required by the subject
matter: reflective discourse does not have the power to express the
"language of simultaneity" required "to think of Jesus' pre-existence,
existence, and post-existence together" (497).   And so what language
is available to us today to express the inexpressible? That of modern
poetry, music, and painting. Kuschel thus ends his book with "medita·
tions " on poems by Mörike, Marti, and Celan, on the one hand, and
pictures by Klee and Jawlenski, on the other. In them all he sees the
fundamental question of " the beginning of all beginnings," " the foun-
dation of all foundations " being asked and answered in very concrete
and evocative ways which alone do justice to the mysterious and para-
doxical reality that is God's revelation in Jesus Christ.

    The most problematic area of the book from the perspective of this

reviewer is the disjunction of biblical and systematic theology, with its implicit skepticism concerning the possibility of a real development of dogma which is founded upon, yet really goes beyond in a positive way, the explicit formulations of scripture. As noted above, Kuschel faults a number of theologians for abandoning the historical perspective and leaping " from the experience of faith to the traditional onto· logical level " (410), and notes that a theology of eternal self-distinc· tion in God *cannot* be " theologically conclusive" because the New Testament does not know it (438); such a conclusion "ignores the text " (446). Indeed, Kuschel seems to reduce systematic theology to exegesis when he states that dogmatics must understand " itself as consistent exegesis" (489) (although this view is somewhat mitigated when he says that " answers from the further history of dogma are not excluded by theology rightly understood" [489]). It is clear, however, that he has little use for the classical theology of pre-existence and hails the collapse of the " great but abstract language of Greek ontology " and " classical metaphysics " (503). Certainly one of his concerns is that the classical christology stands in the way of fruitful dialogue with Judaism, which might be open to an understanding of the pre-existence of Christ in terms of Old Testament models of wisdom and apocalyptic which do not threaten the unity of God. Pauline christology, Kuschel avers, may be the perfect vehicle for Christian-Jewish dialogue because the notion of pre-existence is not central to it (513-16).

Two other minor critical remarks may be made. Kuschel is so intent on finding no implication of Christ's pre-existent divinity even in the Johannine corpus (387) that he gives forced interpretations to the "I am" passages (particularly 8:58), as well as the statement that "the Word was God" in the first verse of the Gospel. Secondly, he states that " the classical theological axiom that God is incapable of suffering" (441) is brought into question by Pannenberg, Rahner, Jiingel, and Moltmann, without noting the massive differences in the understanding of God's 'nature' between, say, Moltmann and Rahner. The latter, I would suggest, only knows a ' suffering' in God as that of the personal subject (the Word) of the suffering of the *humanity* of Christ. Rahner's understanding of God's suffering "in the other" is thoroughly in keeping with the classical understanding of the ' immut· ability' of God, whereas Moltmann's {and probably Jiingel's) is not.

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The Search for the Origins of Christian Worship: Sources and Methods for the Study of Early Liturgy. By PAUL F. BRADSHAW. New York/Oxford: Oxford University Press, 1992. Pp. xi **+** 217. $35.00 (cloth) .

Despite broad and general acceptance of the study of liturgy as an academic discipline comprising (among other things) historical, theological, anthropological, aesthetic, and ritual aspects, liturgical scholars themselves are still engaged in refining the contours of this discipline. With regard to historical perspectives on liturgy, for example, contemporary liturgical scholars have both relied upon the ground-breaking work of authors such as Anton Baumstark, Jean Danielou, Gregory Dix, and Josef Jungmann and urged caution in appropriating their insights too facilely or uncritically. More precisely, the kind of research such scholars were able to do on the sources they examined, the editing of new editions of those same sources, the fact of the discovery of additional sources, and the crucial issue of how to interpret what historical sources have to say require that contemporary liturgiologists revisit the early sources of the liturgy ever more carefully and precisely.

Paul Bradshaw's contribution in *The Search for the Origins of Christian Worship* is nothing short of ground-breaking for the contribution it makes to contemporary liturgical method in general and to the study of liturgical sources in particular.   With admirable clarity and modesty in tone Bradshaw accomplishes his aim: " to offer a guide or handbook for the journey through the field of liturgical origins" (x). He makes no claim that even a careful study of liturgical origins or liturgical history comprises the discipline and craft of liturgiology. What he does claim and exemplify in this remarkable hook is that the study of the sources of liturgy requires careful contextualization as well as precise textual and source criticism of the documents so that what can he legitimately gleaned from historical investigation continues to be a major factor in liturgical study.

Bradshaw published some of the material in this carefully constructed monograph in an article in *Studia Liturgica* 17 (1987): 26-34 and in his contributions to *The Making of Jewish and Christian Worship* (1991) and *Fountain of Life* (1991).   Among the author's noteworthy accomplishments is the way he has incorporated this material into a new synthesis here. The first three chapters deal with the Jewish background of Christian worship, worship in the New Testament, and principles for interpreting early Christian liturgical evidence. Bradshaw states and exemplifies one of his chief theses here: that any sense

of a linear progression from Jewish liturgical forms at the time of
Jesus through the early Christian centuries is impossible to sustain for
at least two reasons. First, the Jewish sources themselves at the time
of Christ were not uniform, as exemplified by the fact that some manu-
scripts presumably attesting to the Jewish practices at the time of
Jesus were not compiled until centuries later. And even then the nor-
mativity of such texts was not universally held. Second, the pluriform-
ity in church life customarily derived from the scientific study of the
scriptures should also be expected to derive from the scientific study
of liturgical sources, for example, because of the difference between
and evolution within the liturgy both East and West.

   With regard to what are customarily more precisely termed " liturgi-
cal sources " Bradshaw offers significant insights in chapter four about
individual documents (e.g., the Didache, the Apostolic Tradition, and
the Apostolic Constitutions) and, even more importantly, their inter-
relationship. The modesty in tone of the whole book is nowhere more
evident than when he observes that one needs to be cautious in deter-
mining whether these documents *describe* or *prescribe* what should be
done liturgically and when he muses about why some of the evidence in
these texts should have appeared there at all. This caution is sustained
in chapter five describing "other major liturgical sources," namely,
the apostolic fathers, patristic texts, and the diary of Egeria. Here
again the descriptive/prescriptive   issue resurfaces especially regarding
Justin's accounts of liturgy in his *First Apology,* insights about initia-
tion rites in patristic homilies and catecheses, and the ceremonies of the
Easter triduum recounted by Egeria.

   In chapters six through eight Bradshaw moves to topical discussions
of the evolution of eucharistic rites (six), of the diversity discoverable
in initiation rites (seven), and of the liturgy of the hours and the
calendar (eight) . These chapters are required reading for any student
of these topics, for they contain the *status quaestionis* discoverable from
contemporary authors' contributions. Bradshaw here breaks through
conventional arguments and presumptions and summarizes a wealth of
contemporary literature, of which knowledge is required for a scientific
study of these rites. The author's own prior contributions to the study
of eucharist, initiation, and the hours are at times carefully woven
into these pages but they never dominate the presentation nor are they
used as the measure of others' work. Bradshaw's concern for precision
is evident in his offering cautions about how to account for variations
" in the supposed eastern and western patterns " of initiation rites
 (163) because these variations themselves may even "suggest that this
basic twofold division presents a false perspective." Or, regarding
the evolution of the liturgy of the hours, the author asserts that the
adjectives used to describe the distinction between the so-called "ca-

thedral" and "monastic " forms may not be the best terms to distin-
guish " the worship of the local Christian church assembled under the
leadership of its bishop and other clergy, on the one hand, from the
daily devotions of individual ascetics and early religious communities,
on the other" (187). This is because "the differences between the
types of worship ... relate not merely to the people who participated in
them but to their external forms and ultimately to their inner spirit and
purpose." True to his basic argument here the author implies a re·
reading of sources and a rethinking about what they reveal about
liturgy lest general principles or often repeated theses overtake the ac-
tual evidence.

Not surprisingly in a book that summarizes the creative research of
so many others (named in an " author index " of seven double-col-
umned pages) one might legitimately take issue with one or another
of Bradshaw's assertions. For example, is Gabriele Winkler's work on
early Syrian initiation rites so acclaimed and universally accepted as
to make Sebastian Brock's work on these same rites worthy of only
brief mention and some footnoting? But given the irenic tone of this
book it would seem that Bradshaw himself would invite such discus-
sion. Furthermore, one might have wished for less generality and
brevity in the chapter on New Testament worship because of the forma·
tive nature of this evidence and the way liturgical scholars have tended
to misuse the scriptures because of their lack of attention to contern·
porary scriptural scholarship and exegetical methods.

There are, however, at least two major methodological questions
about liturgical practice and liturgical study that remain after reading
this extremely valuable book. The first concerns the implications of
Bradshaw's assertion that liturgical sources should be appreciated as
"living literature" (74, 102) "constantly growing, changing, and
evolving as it mov,es from generation to generation, or from one eccle·
siastical tradition to another, with each stage, and not just the first,
offering valuable source-material for historical study" (102). How
does this valuable insight relate to the notion of *normativity* in liturgi·
cal celebration in general and to normativity in the presently revised
liturgy of most mainline Christian churches? This is particularly acute
given the fact that many churches have currently adopted prayer texts
and liturgical rites from what are generally regarded as the formative
centuries of the Christian era over against what have been regarded as
inappropriate practices in the previous unreformed liturgy. (For ex·
ample, what is the advisability of reforming ordination rites on the
basis of Hippolytus's Apostolic Tradition?) Wherein does normativity
lie? On what foundation should liturgical reform be based? What
comprises liturgical tradition on which the present agenda of liturgical
inculturation is normally said to be based?

The second major question concerns method for liturgical study. If one engages in the kind of careful work outlined here on liturgy's early sources, what is one to make of what this investigation uncovers and means for other aspects of liturgical study, namely theology, anthropology, aesthetics, and ritual studies? In other words, how does historical investigation contribute to the study of liturgy as broadly understood to include, but not be confined to, liturgical history? Do we detect one example of a theological nature from Bradshaw himself in his more recent essay " The Offering of the Firstfruits of Creation: A Historical Study" in *Creation and Liturgy* (Washington: The Pastoral Press, 1993, pp. 29-41) ?

As it stands *The Search for the Origins of Christian Worship* is an indispensable *vade mecum* as a key interpretative tool for anyone involved in the scientific study of liturgy. How a serious study of liturgical history informs contemporary liturgical reform or fits as a constitutive ·element of the study of liturgy more generally conceived still awaits the work of other contemporary liturgiologists. One hopes that the standard of excellence established by Paul Bradshaw regarding liturgical history-especially clarity and modesty in tone-will be matched by other equally important contributions to liturgical reform and method.

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