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The Phanerochemical Wedding of Logic and *Philosophia Perennis:* On Morrissey's *The Way of Logic*

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Review of *The Way of Logic*, by Christopher S. Morrissey (Nanjing: Nanjing Normal University Press, 2018), xxxii + 167 pp.

Introduction

The first sentence of a short but seminal work by C. S. Lewis, *The Abolition of Man*, could serve equally well as the first sentence of this book review: "I doubt whether we are sufficiently attentive to the importance of elementary text-books" (Lewis 1943: 1). It is indeed possible that some readers may consider Christopher S. Morrissey's latest book to be mostly of pedagogical interest. The bulk of his volume does, in fact, consist of detailed technical exposition of how teaching logic would be made easier if the academic paradigm that governs today's logic textbooks, which Morrissey calls "MPL", or "Modern Predicate Logic", were to be displaced by "TFL", a technique devised by the American logician Fred Sommers and others, including Morrissey himself. "TFL" stands alternately for both "Term Functor Logic" and "Traditional Formal Logic" (Oderberg 2005: viii).

If we consider the last sentence of *The Way of Logic*, however, we discover that there is more to the teaching of logic than usually meets the eye. It is entirely in Chinese, provided with neither translation nor identification (153). However, readers who require no such assistance will recognize it as the first sentence of the *Tao Te Ching:* "A way that is followed is not the Way; a name that is given is not the Name. The

nameless is the origin of heaven and earth; the named is the mother of all things." Can it be a coincidence that *The Abolition of Man* also concludes with the Tao (Lewis 1943: 51-61), or Dao, as the more current (and more convenient for Morrissey's purposes, as we shall soon see) romanization standard spells it? *The Way of Logic* not only cites C. S. Lewis (105), but we also learn from the "Acknowledgments" (167) that some of its material was presented prior to publication at an event hosted by the Inklings Institute of Canada, an organization inspired by the famous "Inklings" literary group at Oxford to which C. S. Lewis, along with Tolkien and other famous writers, belonged.

In his classic book about an earlier reformer of logic textbooks, Fr. Walter J. Ong writes: "In all cultures pedagogical procedure and philosophy have always influenced one another, but in the intellectual milieu from which Ramus emerged, the two activities not only interacted but were effectively fused" (Ong 1958: 149). Ong's work on Ramus originated with the doctoral dissertation of his thesis advisor, Marshall McLuhan, who argued that the history of Western culture amounts to disputes over how logic should be taught (McLuhan 1943). This review will attempt to disentangle the pedagogical and philosophical aspects of Morrissey's book by reading it as one of the latest acts of valor on this ancient and glorious field of trial.

Validation

Morrissey tells us that *The Way of Logic* is a sequel to his mentor John Deely's *Logic as a Liberal Art*, and both books are among the five included in the series "Select Works of Eminent Contemporary Semioticians" published by Nanjing University Press (Zhang and Yu 2018). Although manuscripts of this work had circulated in many versions since its introduction to the Toronto Semiotic Circle in 1985, Deely postponed its publication because he was still looking for an elegant solution to the semiotic problem he discovered called "validation", which is the logical analysis of invalid arguments in order to make explicit the valid consequences they contain. Deely finally entrusted this search and the posthumous publication of *Logic as a Liberal Art* to Morrissey, who has now completed both tasks "as an act of filial piety" (xxxi).

Deely's concept of "validation" is deceptively simple. It reminds me of Marshall McLuhan's standard response to hecklers which, over Woody Allen's objections, he insisted on declaiming during his famous cameo appearance in *Annie Hall:* "You think my fallacy is all wrong?" (Marchand 1989: 259). McLuhan even considered his favorite retort to be worthy of the attention of the sitting Prime Minister of Canada, writing Pierre Trudeau that "I have yet to find a situation in which there is not great help in the phrase" and adding that it "is literally disarming, pulling the ground out from under every situation!" (McLuhan 1977: 528).

To suggest that a fallacy can be anything else but "all wrong" is indeed capable of "pulling the ground out from under" the Modern Age itself, and this is precisely what Deely accomplished with his semiotic discovery of "validation". His *Logic as a Liberal Art*, quoted by Morrissey, defines validation as follows: "the possibility of using the very rules and techniques which enable the discovery of fallacies to *further* discover the *residue of validity* that might be found implicit to an initially invalidly formulated argument" (5). As Morrissey points out, making "validation" the aim of logic restores it to the place among the three normative sciences to which Peirce assigned it, joining ethics and aesthetics. Logic then becomes again one of the liberal, as opposed to servile, arts. However, the third member of the classical trivium was usually called "dialectic" and not "logic". Could this suggest that oppositions play an important role in a logic aimed at validation rather than invalidation?

Opposition

Sommers based TFL on his empirical discovery that familiar logical words in natural languages "behave and are treated by us as plus or minus operators" (Sommers 2005: 9). "Some", "is", and "and" are examples of plus-words, and "every", "not", and "if" are examples of minus-words. This allows natural language assertions to be transcribed into an extremely compact shorthand form. Morrissey illustrates this by transcribing several examples from a widely used logic textbook (134-145). "Snakes are reptiles"

becomes − S + R. “Not every visitor stayed for dinner” becomes + V – S. With the additional conventions described at length by Morrissey, TFL becomes capable of expressing anything that can be expressed in MPL and more (31). The main point, however, is that TFL derives its logical power from natural language. It is simply a method for making more apparent the logic, or lack thereof, contained in natural language statements, and is therefore analogous to the grammatical methods used to diagram sentences. Morrissey shows that this analogy with diagrams extends to Peirce’s existential graphs, which he sees as an iconic representation of TFL’s algebraic term logic (128).

However, its abundance of +'s and −'s does not mean that TFL is an “algebraic” paraphrase of natural language, a misunderstanding to which Deely himself, according to Morrissey, succumbed (1). TFL’s use of these “functors” is not “algebraic” but analogical (1), which “frees logic to consider as many analogous modes of being as we are able to discern in reality” (51). For example, − A + B can mean both “all A is B” and “if A then B”. The equivocal use of these functors reflects the equivocal nature of Being itself, thus making TFL “a powerful tool for contemplating the analogical relations within reality” (24). It is therefore superior in this respect to MPL, which dispenses with the traditional Aristotelian rubric of “supposition” (35) and thus confines logic to “one tendentiously univocal interpretation of existence” (51).

There are, in fact, three analogically related and semiotically distinct uses of +'s and −'s in TFL which correspond to the threefold modeling system described in *The Forms of Meaning* by Sebeok and Danesi (24). This conformity with semiotic principles is precisely why TFL, unlike MPL, supplies logic with everything it requires to be true to reality (33). “TFL’s + and – functors capture the structure of firstness, secondness, and thirdness at play in every logical proposition” (41) and do so by expressing, as MPL does not, the oppositions within Being itself. “Firstness is most fundamentally understood in logical terms as the contrary opposition of terms; secondness is most fundamentally understood in logical terms as the predicative opposition of predicates affirmed or denied; thirdness is most fundamentally understood in logical terms as the quantitative opposition of subjects” (33-4; cf. 152).

Syllogism

The oppositional nature of TFL's + and – functors, which preserves "the three fundamental oppositional relations assumed by the traditional formal logic of Aristotelian syllogistic" (33), allows logic not only to represent reality but also to "validate" arguments in Deely's sense. This task cannot be performed in the algorithmic way imposed by MPL because of the inherently semiotic nature of human thought (55). Arguments may be "validated" only by applying the neo-Scholastic "*dictum de omni et nullo*" or "DON". Morrissey translates this as "Dictum about All or 0 [zero, or nothing]", assigns to it the acronym "DA0", and thereby associates it with Daoism, enshrined in his title *The Way of Logic* (133).

According to traditional formal logic, the DA0 is the principle upon which all syllogistic inference is based. John Stuart Mill supplies the traditional definition: "whatever can be affirmed (or denied) of a class, may be affirmed (or denied) of everything included in the class." Nominalists consider this dictum to be nothing more than a tautology, but realists conceive it as "a fundamental law of the universe" which expresses "the intercommunity of nature" (Mill 1843: 1:234-5). Morrissey speaks of TFL as "a logic without nominalism" (128) precisely because it expresses "the intercommunity of nature" known as the Dao.

Semiotically speaking, the DA0 is "the logical expression of the intelligible structure of thirdness that runs through all thought and all being, giving them their essential dynamism" (51). It is "best understood as a description of the semiosis by which semiotic animals, aware of the semiotic process, are able to assess the validity of their semiotic inferences" (53). To explain how it operates, Morrissey uses the analogy of "model train sets", which is an update to the "Lego building blocks" analogy used by Susan Petrilli and Augusto Ponzio to describe Sebeok's idea of a primary modeling system. The "logical cognition of the semiotic animal" (52) works by "colligating" premises in a way analogous to the way cars are connected to form a train. The subject or "engine" comes first, followed by middle terms or "boxcars", and the predicate or "caboose" comes last (54). Subjects and predicates may be either positive or negative, but

the middle terms must always follow the pattern expressed in TFL as (+ M − M). As the notation implies, such middle terms may be "cancelled out" in order to create an immediate "copula" between subject and predicate. What Deely called "validation" may thus be characterized as "the mind playing with mental 'train sets' in order to colligate trains of thought from which DON may draw valid inferences" (54).

Subject

The main contribution that Morrissey wishes to make in *The Way of Logic* is "to show how logic helps semiotics *by revealing the structural asymmetry between subject and predicate*, which is something that can ultimately only be understood fully from the semiotic animal's point of view, i.e., from a semiotic understanding of logical semiosis" (55). Subjects are different from predicates because they participate in the equivocal nature of Being. Traditional formal logic addressed the subject's unique role in the structure of reality by means of the "supposition" mentioned earlier in this review, but this construct "has been foolishly excised from modern logic by MPL" (27).

TFL recovers "supposition" by writing three + or – functors in front of the subject term, the second of which indicates its type of existence relative to the domain of discourse (34). For example, a + functor in the second position "can have at least five different meanings depending on the domain of discourse: actual (past, present, or future), potential, or imaginary" (36). Because the DA0 cannot be validly applied to colligated propositions that belong to different domains of discourse, Morrissey proposes adding a convention to TFL in order to distinguish visually between them (37). This is another example of how TFL derives its power from natural language, native speakers of which "have no trouble in shifting between domains of discourse, speaking of things that are actual, potential, or purely imaginary" (41).

The asymmetry of subject and predicate may be recognized only by the active intellect, that uniquely human possession which "makes possible the logical cognition of the semiotic animal, whereby we humans are capable of a species-specific sort of syntactic thought in which, on the most fundamental level

of our species-specific rationality, we can distinguish subjects (which are posited as 'things') from predicates (the 'objects' of our knowledge of subjects)" (52). This asymmetry is preserved in TFL by the DA0: "namely, the requirement that only a colligation of + M – M permits a middle term M to be 'cancelled' out from within any colligation, in order to produce a valid resultant conclusion" (1-2). Morrissey expresses this principle using "model trains" language: "engines must come first, and cabooses last" (56).

Conclusion

The title I chose for this review, "The Phanerochemical Wedding of Logic and *Philosophia Perennis*", is intentionally gnomic. Its first reference is to the *De nuptiis Philologiae et Mercurii* ("On the Marriage of Philology and Mercury") of Martianus Capella, the text which opened Deely's "Latin Age" by bestowing upon it the seven liberal arts (McLuhan 1943: 89n32; Fletcher 1964: 46n45; Deely 2001: 183). According to a notorious remark by C. S. Lewis, "this universe, which has produced the bee-orchid and the giraffe, has produced nothing stranger than Martianus Capella" (Lewis 1936: 78). The second reference concealed within my title is to the *Chymische Hochzeit Christiani Rosencreutz* ("The Chemical Wedding of Christian Rosencreutz"), a Rosicrucian manifesto published in 1616 which marks the end of the Latin Age (Yates 1972: 59-69). My third occult reference is to "phanerochemistry", a cenoscopic science invented by Peirce which eventually became "semiotics" (Tursman 1989: 453). The fundamental hypothesis of phanerochemistry, based on Frankland's 1851 discovery of chemical valence, "is that we understand or cognize anything whatsoever in the same way that we understand or cognize sequences; and the way in which we understand or cognize sequences is by repetitions of *connections-of-two"* (Tursman 1989: 458).

I propose this title as an abbreviated, but not Procrustean, statement of Morrissey's achievement and its historical context. Building on the work of Deely, who restored logic to its rightful place among the liberal arts, *The Way of Logic* employs Peirce's syllogistic conception of nature to develop a notation capable of reconciling logic, and thereby its students, with nature—the Dao—herself. How to "validate" this

proposed coupling of logic and nature must for now, however, remain an open question. Morrissey himself insists that *The Way of Logic* is a call to contemplation, not conversion (153). The attempts of Maritain (1942), Lewis (1943) and Strauss (1953) to recover φύσις have yet to escape their respective sects, and the characterization of modern logic as "gnostic" (Voegelin 1952) has yet to recover from the devastating counterstroke of Blumenberg (1983). Finally, Peirce cannot easily be enlisted in the service of ideas he describes as "caught from Schelling, and Schelling from Plotinus, from Boehm, or from God knows what minds stricken with the monstrous mysticism of the East", and his admission that he may have unwittingly contracted "some benignant form of the disease" (1892: CP 6.102) does little to convince otherwise. The phanerochemical marriage of logic with *philosophia perennis*, or the Dao, is therefore not yet ripe for consummation, and Morrissey's book, however masterful, must be considered only as part of the preliminary publication of banns.

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