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"PARADOX: THEME AND SEMIOTIC VARIATIONS"

ABSTRACT

Starting with the etymology of the word 'paradox' (ultimately from ancient Greek παράδοξον, 'contrary to expectation/opinion'), a thesis is explored that analyzes the relationship between generals and particulars in language structure (and elsewhere) as the fundamental instantiation of a paradox. All such cases are to be seen as a violation of the state, in both thought and discourse, that attains to the ideal of a *concordia discors*. By extension, the mathematical concepts of the continuum and of infinitesimals are examined as a way of exemplifying how paradoxes have been conceived overall from Zeno and the Eleatics to the present day. As William James puts it, the mathematical notion of the infinitesimal embodies "the whole paradox of the same and yet nascent other, of an identity that won't keep except insofar as it keeps failing." This is contrasted with Peirce's view that there is a perfectly consistent conception of mathematical entities that embody both identity and difference, whose mode of relation is genuinely triadic, and which are truly continuous. The high contemporary incidence of grammatical hypertrophy (e. g., pleonasm) in American English is adduced in support of the notion that all paradoxes are at bottom failures of thought. The paper ends with an examination of irony as paradox, wherein the elevation of rhetorical strategies, cues, and signals restricted to the negativizing of propositions to the status of genuine interpretants is seen as ultimately robbing ironic deconstruction (understood programmatically) of power either as interpretation of literary history or as prescription for critical practice, and producing the convenient rhetorical fiction of a critique that allows one not to deal with value at all. It is just this utter disparagement of value in contemporary humanistic studies that is to be adjudged the epitome of paradox.

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Paradox: Theme and Semiotic Variations[1] 1

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I want to begin my discussion by emphasizing the notion that what can be identified sensu stricto as *paradox* lies at some point on a continuum that includes what I want to distinguish as *the paradoxical*, i.e., some state of things that partakes of the qualitative quiddity of paradox without, however, participating in the cognitive impasse paradox leads to traditionally, from Zeno and the Eleatics to the present day. I will not always distinguish between paradox and the paradoxical, but the difference will always be implicit in my whole discussion.

I also want to lend my discussion the proper aura by being paradoxical myself, in two respects: (1) by not discussing the familiar paradoxes that carry their propagators' names—such as Zeno,[2] Parmenides, Russell, et al.; and (2) by not defining paradox. The only exception to this procedure, occasioned by my extensive discusssion of irony later in the chapter, is the definition from the *Oxford English Dictionary Online* pertaining to literary criticism, as follows:

> b. Literary Criticism. The expression of meaning using language that is paradoxical. 1939 C. Brooks & R. P. Warren *Understanding Poetry* vi. 637.
> Paradox, a statement which seems on the surface contradictory, but which involves an element of truth. Because of the element of contrast between the form of the statement and its true implications, paradox is closely related to irony.

That my deliberate eschewal of definition is appropriate to my

[1] This is a revised version of my keynote address, delivered under the title "Paradox: Word, Symbol, Concept" at the 39th Annual Meeting of the Semiotic Society of America in Seattle, Washington, on October 2, 2014. The new subtitle is intended as a tribute to my friend, the extraordinarily versatile music theorist, poet, and librettist Robert Hatten, who was instrumental in my being named the keynote speaker at the Seattle meeting. I also want to thank my old friends, Nils Thelin and Dan Nesher, for their valuable comments on the working draft of the address.

[2] Editor's note: See the Postscript section at the end of this chapter for further relevant thoughts recommended by the author from Thelin (2014) and Nesher (p.c.) on Zeno and other thinkers.

discussion and in the spirit of the topic can be epitomized by the pivotal function of *negation* in any analysis of the subject: whatever else is true of paradox and the paradoxical, negation is central—implicitly or explicitly—to its structure and explication. *At the most fundamental level, in paradox something is NOT what its meaning purports to be***.** Perhaps that is really at the core of what T. L. Short, one of the most astute and discriminating commentators on Peirce and semeiotic working today, and a fine stylist of English to boot, means when he employs the phrase "éclat of paradox" in a recent article (Short 2013: 287), as follows:[3]

> We have arrived at this point: Peirce's one contribution or single assured result of positive importance is, on his own express telling of it, not NL. Instead, it is his three phaneroscopic categories. They are somehow 'in' NL ["On a New List of Categories" (Peirce 1868: EP1.1–10], but, on Peirce's own express telling, they are made "more intelligible" in his own later, phaneroscopic writings. The supposition that Peirce meant that NL is his one contribution has always enjoyed the éclat of paradox—so early a work, so difficult, so much in need of exegesis.

Merriam-Webster Unabridged Online defines *éclat* variously as:

> 1: dazzling effect : brilliance <the stern imagery and rhetorical *éclat* of the first stanza—Robert Lowell> : display of pomp or pageantry <arrived with much *éclat*, entering the capital in a coach of state drawn by eight milk-white horses—C. G. Bowers> dash, energy <the croupiers … spin the wheel with *éclat*—Joseph Wechsberg>
> 2*a*: public display or ostentation : publicity <this letter was sprung … with great *éclat* … in public hearing—*New Republic*>
> *b archaic* : notoriety, scandal<with the object of saving an *éclat*—Lord Byron>
> 3: brilliant or conspicuous success <dominated the House of Commons with *éclat*—C. H. Driver> fame, renown <handed down to posterity with all the *éclat* of a proverb—Jane Austen> applause <gave me more *éclat* than my efforts merited—S. H. Adams>

[3] In referring to Peirce, the standard abbreviations will be used, viz. EP for *Essential Peirce* followed by volume and page number; NEM for *The New Elements of Mathematics* followed by volume, part (if there is one), and page number; W for *Writings of Charles S. Peirce* followed by volume and page number; CP for *Collected Papers of Charles Sanders Peirce* followed by volume and paragraph number; RLT for *Reasoning and the Logic of Things* by page number.

Quine asks on the very first page of his famous essay, "The Ways of Paradox", first published as "Paradox" in *Scientific American* (1962: 84, 1976: 1),

> May we say in general ...that a paradox is just any conclusion that at first sounds absurd but that has an argument to sustain it? In the end I think this account stands up pretty well.

He then qualifies his account by commenting (1976: 1):

> But it leaves much unsaid. The argument that sustains a paradox may expose the absurdity of a buried premise or of some preconception previously reckoned as central to physical theory, to mathematics, or to the thinking process. Catastrophe may lurk, therefore, in the most innocent-seeming paradox.

To get out of this bind, Quine then distinguishes between two kinds of paradox, those he calls "veridical" (paradoxes "where what is established is true") and those he calls "falsidical":

> In a falsidical paradox there is always a fallacy in the argument, but the proposition purportedly established has furthermore to seem absurd and to be indeed false. (Quine 1976: 3)

Restating and slightly amplifying Quine's distinction, in Sorenson's words from his recent book, *Paradox: Philosophy and the Labyrinths of the Mind* (2005: 351),

> Quine does not mean that all sustaining arguments are *sound*, for he thinks many paradoxes are false conclusions [= "falsidical" paradoxes]. Nor does Quine think that all sustaining arguments for falsidical paradoxes are fallacious.

Leaving Quine aside (which is where he belongs, given his unreconstructed logical positivism!), I want to mention some ideas on what constitutes a paradox—more or less at random—that came to me when I was preparing my keynote. Begging your indulgence for the moment and without covering the waterfront,[4] here are some talking points for your consideration before getting to some meatier matter.

[4] Even though this address was originally presented in Seattle.

"Chance Begets Order"[5]

Peirce, in his article "Evolutionary Love", says:

> *The Origin of Species* was published toward the end of the year 1859. The preceding years since 1846 had been one of the most productive seasons,—or if extended so as to cover the great book we are considering, *the* most productive period of equal length in the entire history of science from its beginnings until now. The idea that chance begets order, which is one of the corner-stones of modern physics ...was at that time put into its clearest light. (1893: EP1.358)

Earlier, in his article 'The Fixation of Belief", Peirce had commented:

> Mr. Darwin proposed to apply the statistical method to biology. The same thing had been done in a widely different branch of science, the theory of gases. Though unable to say what the movements of any particular molecule of a gas would be on a certain hypothesis regarding the constitution of this class of bodies, Clausius and Maxwell were yet able, by the application of the doctrine of probabilities, to predict that in the long run such and such a proportion of the molecules would, under given circumstances, acquire such and such velocities; that there would take place, every second, such and such a number of collisions, etc.; and from these propositions were able to deduce certain properties of gases, especially in regard to their heat-relations. In like manner, Darwin, while unable to say what the operation of variation and natural selection in any individual case will be, demonstrates that in the long run they will adapt animals to their circumstances. (1877: EP1.111)

Equal vs. Equivalent (the Identity Paradox)

Because the philosophy of mathematics has always had to do with paradoxes of one kind or another, it may be pertinent to mention that what is called non-standard analysis and identified with the discoveries of the late twentieth-century mathematician Abraham Robinson makes a point of emphasizing that the relation of equality must be

[5] This phrase is evidently original with Peirce. For an illuminating textual examination of Darwin's tergiversations regarding the role of chance in evolution, see now Johnson (2015).

superseded by the relation of equivalence in order to understand certain fundamental concepts such as continuity and the continuum.[6] In this regard, as a linguist, I would like to call attention to what may be called "the identity paradox" or "the paradox of the equals sign" as it pertains to language. This will serve as an introduction to my later discussion of continuity in greater detail as it bears on the notion of paradox.

Continuity and Markedness

The idea of continuity, or unbrokenness, which is the leading idea of the differential calculus and of all the useful branches of mathematics, plays a very great—if covert—part in all scientific thought, not least in linguistic theorizing. Mathematics, despite its fundamental allegiance to purity and the ideal, is also an observational, experimental science of diagrammatic thought. When language is viewed as a patterned system of cognized relations, the method of investigating the pattern comes close in spirit to mathematical reasoning. This is particularly true when the relations are understood to be points on a continuum, similar to the "cuts" a topological analysis would identify in the mathematics of spatial relations. Linguistic oppositions are analogous to such "cuts" because they are simultaneously discrete and mutually contingent points along the form/content continuum that informs all language structure. Such points, when cumulated, are equivalent to the inventory of linguistic categories in any natural language. While oppositions are based on the idea of mutual exclusivity, in language (as distinct from logic) they are to be understood fundamentally as reintegrated in language use and language history by their inherence in a continuum where gradience or contrast subsists alongside polarity.

Markedness is a formal universal, a property of all oppositions in language and culture, which superimposes a value system on the network of oppositions. Markedness theory investigates the interaction between the form and the substance of linguistic oppositions, and it is this dual focus that binds the theory to the idea of continuity in the mathematical sense.

A "topological" approach to language structure inspired by Jakob-

[6] See Robinson (1979). Peirce is now commonly regarded as a forerunner of topology (which he called "topics") and non-standard analysis (cf. Johanson 2001). See the new collection of his contributions to the philosophy of mathematics (Moore, ed. 2010a); also the companion volume of essays analyzing his contributions (Moore, ed. 2010b).

son's articulation of the affinities between mathematical reasoning and the conceptualization of grammatical relations—by the language user as well as the language analyst—is embedded in the framework of a linguistic theory that takes the form of meaning, i.e., markedness, to be the key to the understanding of language structure.

All contemporary linguistic theorizing is structural in the sense of this conception of language as a system of patterned relations. (More about structure later.)[7]

General vs. Particular

The relation between generals and particulars contains a paradoxical element that tends to be overlooked. A more thorough examination of the relation will come later under the compass of the old controversy between nominalism and realism. Here I would like to mention only the matter of change in language as a fertile ground for considering the general and the particular in the context of paradoxicality. A focus on innovation in language provides a handy way to bring out some of the salient points.

The matter can be put in terms of what are called "spontaneous innovations" in language.[8] Spontaneous innovations are the innovations by which speakers interpret as regular variation what is objectively mere fluctuation. Spontaneous innovations play an important role, for instance, in low-level phonetics. It is through spontaneous innovations that the naturally occurring mutual adjustments of contiguous phonic elements (intrinsic allophones) are elevated to conventional, that is, rule-governed indexes (extrinsic allophones). By such innovations, phonetic fluctuation—that is, to put it in Saussurean terms, the amorphous sound material just beyond what is linguistically formed—is given linguistic form as rules of allophonic variation and, in this way, semioticized. The resulting variation, which originates as the upshot of individual spontaneous innovations, is idiosyncratic at first and may gain currency only if it is ascribed social value.

The likely reason why spontaneous innovations arise is that our ability to acquire language is so superior to the task that even the

[7] Particular attention should be paid in this context to the notion of *value*, which occurs only in culture and never in nature. Whether there are laws by which values are adopted and distributed – in language or in culture more broadly – is a question to be answered affirmatively, but that is a subject for another essay.

[8] For a thorough analysis of the topic, see Andersen (1989), from which my discussion here is adapted.

merest cues—paradoxically!—may suffice for the identification of some existing regularities, and even random fluctuations may be interpreted as rule-governed variation. If this is so, learners must bring to many of their analytic decisions definite expectations regarding the kinds of values to assign to alternative expressions and the kinds of phonetic dimensions to pick out for allophonic variation. For example, alternative expressions become indexes of social group membership, but never of hair color, body height, or other physical characteristics. Similarly, allophonic alternations are created which highlight existing phonemic distinctions, not in any conceivable, random way, but in apparent accordance with universal regularities.

If spontaneous innovations are readily adopted and acquired by members of a community, even though they serve no immediate communicative purposes in discourse, the reason may well be that they serve essential functions in their grammar.

Meaning by Indirection (the Uniqueness of Human Language)

"Heads roll at the Vatican bank," was the opening statement of a radio broadcast ("Marketplace Morning Report," NPR), which any person with a sufficient knowledge of English automatically understood to mean nothing to do with decapitation literally, only metaphorically, i.e., in a transferred sense, via the visceral image used in English to connote persons who had been dismissed from their positions.

This business of saying one thing and meaning another—and being understood correctly nonetheless—is a paradox at the very heart of human meaning.

The tropological use of language, which can be called *meaning by indirection*—NB the privative (= negative) prefix *in*-!– is the unique semiotic capacity of the human species. Despite claims in the animal ethology literature about primates like chimpanzees and bonobos, and even non-primates like parrots and whales, nothing reported about the communication systems of animals (including mimicry, camouflage, and other forms of deceptive behavior) is even remotely comparable to the capability at the heart of human language, namely the routine ability of saying one thing while meaning another—and being understood correctly.

American public discourse is full of clichés, especially of the figurative kind, so that shallow phrases like "low-hanging fruit" and "kick the can down the road" are inevitably to be met with at every turn. In fact, there are certain speakers—not just politicians or persons in the media—who cannot put anything into words without resorting

to locutions of this sort. By extension, the use of figurative expressions from one stylistic domain in referring to material in another—for instance, calling a physician's practice a "hustle" (without any necessary pejorative connotation)—is to be regarded as yet another prevalent form of linguistic self-indulgence.

In all such instances, what we have in current speech is a tilt toward meaning by indirection, which amounts to an avoidance of precision. Plainspokenness and direct designation of concepts and actions are sacrificed at the altar of what is erroneously taken to be enhanced expressiveness, whereas all that this discourse strategy achieves is a reliance on clichés and dead tropes that exposes their utterers' fundamental impoverishment of thought.

Invariance under Transformation

Before going too much further before ending, I want to touch on another seeming paradox, which is at the heart of structuralism in all disciplines, namely the idea that no matter how much variation there is in the physical reality we perceive, wherever there is order and not mere flux, the principle of this relation is what is called "invariance under transformation." *An invariant is present immanently as law* no matter how much the data fluctuate. That is the core of structure.

It might be useful at this point in the discussion to try to be more specific about what I consider to be structuralism. Perhaps I can clarify my understanding by casting it in terms of Peirce's synechism, the doctrine of continuity that qualifies as the all-embracing framework for Peirce's whole philosophy.[9]

The general characterization of continuity in Peirce can be reified by seeing how he aligns it with his mathematics, specifically with what comes to be called topology or non-standard analysis. Speaking of topological space, Peirce qualifies it as continuous in the event it meets either of two conditions: it must return to itself or contain its own limits. If it is "unbroken", it must return to itself; if it has limits, such limits represent a breach of continuity, manifested as "topical singularities" of a lower dimensionality than that of the continuum itself. In two-dimensional space the limits can be either points or lines. In the case of a line, the topical singularity is itself continuous, but it is a continuum of a lower dimensionality than that of the space that contains it (c.1896: CP 1.501): "so space presents points, lines, surfaces, and solids, each

[9] See Locke (2000) for an analysis of synechism as the overarching concept in Peirce's understanding of his own philosophy.

generated by the motion of a place of lower dimensionality and the limit of a place of next higher dimensionality."

In this manner a whole series of continua of varying dimensionalities can be envisaged, embedded within one another, with any continuum of N dimensions having as its limit, in the form of a topical singularity, a continuum of not more than N-1 dimensions. Dimensionality, then, is conceived as a topological characteristic of continua.

Applying these topological ideas to the analysis of the hierarchical structure of simultaneous syntagms in semiosis, such as that of phonemes or tropes, we can identify syntagms with continua and rank relations with dimensionalities. (This matches, in a shorthand version, some of the late Kenneth Pike's main ideas about language structure.) The segmentation of the continuum into elements that are organized hierarchically is attended by boundaries between them, corresponding to the idea of limits in topological space.

Language and culture are organized into continua that illustrate Aristotle's conception of a continuum as containing its own limits. Every element of a syntagm is to varying extents both distinct (bounded) and conjoined with every other. (In "The Law of Mind" [1892] Peirce uses the example of a surface that is part red and part blue and asks the question, "What, then, is the color of the boundary line between the red and the blue?" [1891: CP 6.126]). His answer is "half red and half blue".) With this understanding we are reinforced in the position that the wholes (continua, gestalts) of human semiosis are simultaneously differentiated and unified.

But perhaps the question we really need to ask is: what is simultaneity as such? And more precisely: does simultaneity have parts? We know that in visual perception the parts of a whole (gestalt) are presented simultaneously and can be apperceived totally, severally, or serially, depending on the particular focus prompted by interest and attention. But in non-spatial terms, again, is simultaneity as such stratifiable into levels or components?

One of the examples Peirce cites by way of exploring the relation between time and continuity suggests a positive answer. In "The Law of Mind" Peirce says (1891: CP 6.126): "what is present to the mind at any ordinary instant, is what is present during a moment in which that instant occurs. Thus, the present is half past and half to come." This idea about time is congruent with his fundamentally Aristotelian position concerning the properties of a line—which for Peirce was any line, not necessarily a straight line, and for Aristotle an irreducible geometrical object. Thus if a line is divided into two halves, called line intervals, then the endpoints of both segments are loci; and

in the words of Ketner and Putnam (1992: 40), "a line interval by the mere fact of existing as a line interval 'defines', as it were, its endpoints. They are abstract properties of the line interval itself, and the notion of a line interval with no endpoints is senseless." When the original line is reconstituted, the two middle endpoints once again coincide at the point of division as one point. This point which is capable of splitting into two corresponds exactly to the moment of the present that is simultaneously half past and half future.

We can perhaps get a firmer grasp on the nature of simultaneity by looking at the continuum from a slightly different point of view, suggested by another of Peirce's examples (from his eighth and final Cambridge Conferences Lecture of 1898, "The Logic of Continuity"), which deserves to be cited in full (1898b: RLT 261–262):

> Let the clean blackboard be a sort of Diagram of the original vague potentiality, or at any rate of some early stage of its determination. This is something more than a figure of speech; for after all continuity is generality. This blackboard is a continuum of two dimensions, while that which it stands for is a continuum of some indefinite multitude of dimensions. This blackboard is a continuum of possible points; while there is a continuum of possible dimensions of quality, or is a continuum of possible dimensions of a of possible dimensions of quality or something of that sort. There are no points on this blackboard. There are no dimensions in that continuum. I draw a chalk line on the board. This discontinuity is one of those brute acts by which alone the original vagueness could have made a step toward definiteness. There is a certain element of continuity in this line. Where did this continuity come from? It is everything upon it continuous. What I have really drawn there is an oval line. For this white chalk-mark is not a line, it is a plane figure in Euclid's sense, a surface, and the only line [that] is there is the line which forms the limit between the black surface and the white surface. Thus discontinuity can only be produced upon that blackboard by the reaction between two continuous surfaces into which it is separated, the white surface and the black surface. But the boundary between the black and white is neither black, nor white, nor neither, nor both. It is the pairedness of the two. It is for the white the active Secondness of the black; for the black the active Secondness of the white.

In this image of blackboard and chalk mark we have the perfect visual analogue of the simultaneous syntagm in human semiosis, which is a continuum ramified by discontinuities that are themselves

continua. In this structure, the boundary between the components of the syntagm is not only necessarily present but plays the crucial role of binding and separating simultaneously.

Continuity and Infinitesimals (No Such Thing as the Present)

Peirce's prescient conception of continuity can be effectively glimpsed through the prism of infinitesimals, which before the advent of Robinson's nonstandard analysis and of topology used to be considered either non-existent or paradoxical or both. Here is how Kelly Parker puts it in his very useful book, *The Continuity of Peirce's Thought*:

> Infinitesimals, conceived as parts of a linear continuum, are the formal mathematical paradigm for very small parts of any continuum. Neighboring infinitesimals are indiscernible and hence identical; yet because they are potentially ordered, they are potentially different. As William James puts it, the mathematical notion of the infinitesimal embodies "the whole paradox of the same and yet nascent other, of an identity that won't keep except insofar as it keeps failing." In chapter 4 I described how Peirce might have reasoned through this paradox. The merits of that argument could be discussed at length, but the important thing here is to recognize that for Peirce the paradox was only apparent. There is, in his view, a perfectly consistent conception of mathematical entities that embody both identity and difference, whose mode of relation is genuinely triadic, and which are truly continuous. (Parker 1998: 103)[10]

When it comes to thinking about time as a continuum, Peirce makes the case for the paradoxical notion that there is no such thing as the present, to wit:

> If time flows, no instant has an absolutely independent identity. It is so far independent that an instantaneous state of things may be supposed to exist absolutely at that instant alone. But a duration which begins or ends at that instant cannot properly be said absolutely to contain or absolutely to exclude that instant. (NEM 3: 747, in Parker 1998: 84)

Three exemplifications of paradox that are of personal provenience will conclude this chapter. The first has to do with grammatical hypertrophy, which I characterize as *a failure of thought*.

[10] On Peirce and his treatment of infinitesimals, see also Herron (1997).

Grammatical Hypertrophy

Members of a speech community use linguistic innovations to signal a variety of messages, such as 'stronger meaning', 'group solidarity', 'greater intimacy', or their opposites. Innovations can be motivated not only by strictly linguistic reasons but by systems of values that also apply to aspects of human behavior beyond speech. Particularly frequent in present-day American English are spontaneous grammatical innovations that redundantly repeat, duplicate, or extend elements of their traditional normative counterparts without any apparent gain in communicative content. Pleonasm is the most familiar category of such hypertrophic forms, some of which have in fact become part of the norm. A rational explication of such changes rests on the key assumption that any novel expression, apart from the content invested in it by grammar and pragmatics, has a specific value—or connotative content—by virtue of being different from a traditional expression with the same grammatical and pragmatic content. But in a more abstract sense such changes are ultimately to be explained as instantiations of broader cultural and ideological values. Here are data drawn largely from media and colloquial language and grouped by grammatical categories. I view these examples as instances of paradox.[11]

I. Contextual hypertrophy

(1) "There was a moment back in 2002 when ...[opening sentence]" (Caryn James, "Aniston Agonistes: Good Girl, Bad Choices," *NYT*, 6/5/06, p. B1)

(1′) "The author of seven other books, she was a fellow at the library when she first got the idea back in 2001, on 9/11" (Patricia Cohen, *NYT*, 2/14/08, B9)

(2) "But none has gone quite so spectacularly to the bad as John Amery, the elder son of Churchill's old friend and wartime Secretary of State for India, who ended up being hanged for treason in 1945. Back in 1949 Amery was one of the subjects … (John Campbell, "Nasty and Short," *TLS*, November 18, 2005)

(3) "back in January"—said in February (unidentified man, viva voce; cf. [way] back [when])

II. Anaphoric hypertrophy

(4) "The days when blue-collar work could be passed down the family line, those days are over." (Gay N. Chaison, Prof. of Labor Relations, Clark Univ., quoted in *NYT*, 11/19/05, p. B7]

[11] *NYT* = *The New York Times* (all references are to the National Edition), ME = "Morning Edition", NPR = National Public Radio.

(5) my sister-in-law, she ...[possible interference from Romance langs.]

III. Morphemic hypertrophy, incl. hyperurbanisms

(6) irregardless
(7) begrudgingly
(8) harken back
(9) informant [vs. informer]
(10) prior to [instead of before]
(11) "'He is entirely correct [instead of "right"],' Mr. Cheney said on Tuesday at Fort Drum, N.Y., referring to Mr. Lieberman." (*NYT*, 12/10/05, p. A1)
(12) "upspike" - on the model of uptick (unidentified woman interviewee, NPR, "ME", 5/31/06)
(13) purchase [instead of buy]
(14) incorrect [instead of wrong]
(15) academia [instead of academe]
(16) usage [instead of use]
(17) "For the past 88 years ...when public sentiment against Germany was at a feverish pitch." (Jim Robbins, "Silence Broken, Pardons Granted 88 Years After Crimes of Sedition," *NYT,* 5/3/06, p. 1)
(18) "Clinton will be adjudicated by ..." [instead of "judged by"] (William Bennett, "CNN Today," 12/26/97)
(19) "Can I importune on you for an extra ticket?" (male theater reviewer, viva voce, Los Angeles, 6/4/06)

IV. Excessive repetition [three instead of two—said without emphasis]

(20) day after day after day
(21) side by side by side
(22) step by step by step
(23) "ran down and ran down and ran down ...ran up and ran up and ran up ..." (Allan Sloan, commentator, NPR, "Marketplace," 6/5/06)

V. Pleonasm (NB: standard and semi-standard pleonasms, e.g. friend of mine, advance planning, prior experience, component parts, close scrutiny, etc.)

(24) "share ... in common" (Donald Rumsfeld, Secy. of Defense, Press Conference, CNN, 4/15/03)
(25) share … similar …
(26) exactly right
(27) continue on
(28) equally as

(29) "The ability of the Congress to be able to ..." (James Sensenbrenner, NBC, "Meet the Press," as heard on NPR, "ME," 5/28/06)
(30) "...add some additional policemen to patrol ..." [twice in the same utterance] (Mark A. R. Kleiman, Prof. of Public Policy, UCLA, KPCC.FM, "Zócalo," 5/28/06); also heard on KPCC.FM: "receive a receipt;" "receive a warm reception"
(31) "With graduation ceremonies coming right up around the corner ..." (Joel Rubin, *Los Angeles Times*, interviewed on KPCC.FM, 5/24/06)
(32) "previous precedent" (unidentified male law professor, Northwestern Univ., NPR, "ME," 1/10/06)
(33) "two minutes twenty-five seconds left on the clock" (Frank Deford, commentator, NPR, "ME," 12/7/05)
(34) "Moussaui ... intentionally lied ..." (Anne Hawke, reporter, NPR News, 4/3/06)
(35) "But far too many seemed to be innocents or lowly foot soldiers ..." (Editorial, *NYT*, 3/8/06, p. A26)
(36) "It is simply that simple." (Sen. Diane Feinstein, quoted in *NYT*, 1/25/06, p. A16—also heard on NPR)
(37) "I for one would have very strong opposition to any kind of star chamber proceeding that's held in private." (eadem, quoted in *NYT Magazine*, by William Safire, "On Language", 1/17/99, p. 18)
(38) "The one statistic that keeps China's leaders up awake at night is ..." (Andy Rothman, stock broker, NPR, Marketplace, 1/16/06)
(39) "As we advance ahead timewise ..." (Bob Stokes, weather forecaster, The Weather Channel, 10/25/99)
(40) "Each video contains two 1-hour episodes on each video." (attributed to Columbia House [home-video mail-order company], by William Safire, "On Language," *NYT* Magazine, 7/18/99, [p. ?])
(41) "Currently as of now we have spent ..." (Rep. Jerry Lewis, "Newshour," PBS, 7/27/99)
(42) "My other fellow senators ..." (Sen. Robert Bennett, "CNN Saturday," 1/23/99)
(43) "...four straight days in a row" (stock broker, viva voce, Manchester, Vt., 1999)
(44) "...also received cash payments as well." (unidentified news reader, "World Today," CNN, 1/24/99)
(45) "...increasingly more violent." (John W. Slattery, letter to the editor, *NYT Magazine,* month and day unknown, 1999, p. 14)
(46) "Obviously I'm stating the obvious." (lawyer, viva voce,

Manchester, Vt., 6/6/06)

(47) "Kissinger and Putin met at Putin's country *dacha*." (Daniel Schorr, commentator, NPR, "All Things Considered," 6/7/06); cf. "shrimp *scampi*," "PIN number," etc.

(48) "...to move progress [in the Serbia—Kosovo negotiations] forward ..." (Emily Harris, reporter, NPR, "All Things Considered," 7/24/06)

(49) "'It was like, "Oh, my God, we're on the cusp of something big about to happen",' Mr. Washington said." (Diane Cardwell, "Daring to Believe, Blacks Savor Obama Victory," *NYT*, 1/5/08, p.A1)

VI. Hyperbole

(50) absolutely

(51) great, tremendous, terrific, awesome, etc.

VII. Deictic adverb ([out] there, here) Þ interpretation: avoidance of "placeless existence;" cf. "be/have in place"

(52) "There's a real world out here where people are offered . . " (Ruth Lewin Sime, letter to the editor, *NYT*, 6/5/06, p. A22).

(53) "There's a lot of sadness here." ([in a context where the place has already been stipulated] attributed to Jamie Dettmer, director of media relations, Cato Institute, in "Columnist Resigns His Post, Admitting Lobbyist Paid Him," *NYT*, 12/17/05, p. A15)

(54) "Where's your heart rate at?" (female fitness trainer [with a B.A.], viva voce [speaking to a client wearing a monitor], W. LA, 6/5/06); cf. "What's your heart rate at?"

VIII. Deictic introduction

(55) "The reality is is [that] ..."[12]

(56) "The fact of the matter is is [that] ..."

The second exemplification of paradox from personal experience was suggested by the only comment my old and dear friend, the outstanding historical linguist Raimo Anttila, whose book *Historical and Comparative Linguistics* (2nd ed., 1989) is a classic and remains to this day the best introduction to the subject, made to me when I informed him that I would be giving the keynote address to the SSA on paradox. Anttila said in a tone of utter scorn and consummate disdain: "The very fact that Chomskyan linguistics became the dominant paradigm is a monumental paradox!"

Apropos of his remark, perhaps an excursus in terms of nominalism vs. realism will help ameliorate if not resolve his paradox.

[12] See Shapiro and Haley (2002) for a detailed analysis of this phenomenon.

Nominalism and Realism in Linguistics[13]

Philosophers have always thought of nominalism as a doctrine, not as a practice. They may therefore be excused for having trouble seeing the relation of nominalistic linguistics to the doctrine of nominalism, which is that the former is a way of doing linguistics to which doctrinal nominalists could not object, but that would seem deficient to those who are doctrinal realists. For if there are no classes in reality, but they exist in name only, as doctrinal nominalists claim, then any way of dividing up phenomena, including linguistic phenomena, is as good—or at least as true—as any other. And by "nominalistic linguistics" I mean the practice of imposing an arbitrary taxonomy on linguistic phenomena.

This use of terms and concepts from the history of philosophy to make headway in linguistic theorizing may be interesting but also possibly confusing, the latter for the following reason. The linguistic phenomena classified might include linguistic universals (the Peircean 'types') as well as linguistic individual events (the Peircean 'tokens'). And one who is familiar with the nominalist/realist distinction as a matter of doctrine only might naturally suppose that by 'nominalist linguist' is meant one who denies the reality of linguistic universals. That, of course, would be an application of the nominalist doctrine to linguistic phenomena; but that, one can see now, is distinct from nominalist linguistics as a practice or method. Nominalism as a practice would not necessarily deny that universals are real; rather, it consists in deciding their classification arbitrarily—both their classification into subtypes, if they are segregated from individuals, and whether to so segregate them. Even their classification as real or unreal would be quite arbitrary.

The Chomskyan search for deep structure and generative principles looks relatively realist from a doctrinal point of view. [In using the label 'Chomskyan', I intend to let it refer not only to Chomsky himself (including the latest tergiversations) but to all the latter-day offshoots of transformational-generative grammar as well—even those like Natural Phonology and Morphology or Optimality Theory that claim to be founded on principles that diverge from Chomskyan linguistics.] For whether or not surface phenomena are conceptualized in terms of types as well as tokens, the deep structure and principles look like universals, and especially so the way Chomsky and

[13] What follows is adapted from Shapiro (2001: 193-196), reprinted by permission of the publisher, John Benjamins.

his followers speak of them. Chomsky and his school are nominalist linguists, not realist linguists, because their taxonomy of surface phenomena—the phenomena they wish to explain as following from deeper principles— is arbitrary. (It would follow that the hypothetical structure must be arbitrary too, for it is justified only by its capacity to explain those phenomena.)

'Realism', of course, is used to designate the opposite of phenomenalism as well as the opposite of nominalism. With respect to doctrine exclusively, not method, Jakobson and his neo-structuralist continuators look like phenomenalists in contrast to Chomsky and his followers, since the former seem much more concerned with the description of what is here being called surface phenomena, whereas the latter plunge quickly to the (putative) underlying realities that explain them? One could say that Chomsky is in error for proceeding too quickly: after all, how can he abduce explanatory realities when he is wrong about the explanandum? But this is not so simple an issue as that. For if the classification of phenomena is to be real, not nominal, then it is often impossible to know what that classification is until the underlying realities have been identified. As an example from a domain other than language, consider whether it was possible to know that rusting, fire, and metabolism should be classed together as members of the same natural kind before they were all explained as different forms of oxidation. The circle here is like the hermeneutic circle: the explanans and the explanandum are found together, not first one and then the other.

But there is another way of looking at this which can be identified, mutatis mutandis, with that of semiotic neostructuralism in linguistics. (By 'semeiotic neostructuralism' as applied to the study of language I mean the doctrine and method that emanate from an amalgamation of Jakobsonian linguistics with Peircean semiotics.)

Realism in contradistinction to nominalism (doctrinally) is connected with teleology—or so, at least, Peirce appears to have thought. A natural class is one the members of which exist because each satisfies the same idea. That idea has a certain potency, and hence the class exists independently of anyone's having named it. This idea is consistent with the argument of the preceding paragraph according to which some natural classes may be those classes entailed by a true explanatory theory. But it is not limited to cases where the explanatory structures lie beneath the surface phenomena. Suppose language qua phenomenon has a history, and suppose that history can be understood by postulating goals not involving any underlying mechanisms. For example, linguistic change might be seen as tending toward a more adequate diagrammatization. Then we have a teleo-

logical basis for identifying natural linguistic classes, namely those that we have to attend to in order to understand language as diagrammatization. (This too involves a hermeneutic circle: neither the right description of the process nor the goal that explains it can be discovered without also discovering the other.)

If the preceding is a roughly correct account of the linguistic practice of semeiotic neostructuralism, then it would seem that one who espouses the latter is in method, if not in doctrine, a realist as opposed to a nominalist, but a phenomenalist as opposed to a realist, and a teleologist. (T. L. Short (p.c.) points out that there is a methodological use of 'phenomenalist'; for instance, classical thermodynamics is often called 'phenomenal thermodynamics', not because its proponents are phenomenalists in philosophical doctrine but because it formulates the laws of thermodynamics without reference to the atomic theory of matter, which, with Boltzmann et al., was found to explain and quantify those laws.)

One may doubt whether a semeiotic neostructuralist is a phenomenalist in doctrine. For such a linguist does not deny, in fact, he presupposes that there are realities beyond or beneath language but for which his teleological account of linguistic change would make no sense. That is, there must be flesh-and-blood bodies that speak and listen, and it is their desires and needs that explain why ever more adequate diagrammatization is an inevitable if unintended goal. If the research program subtended by semeiotic neostructuralism can be made to work, then it will indeed conflict with Chomskyan linguistics—and prove superior to it. Here is why.

Chomsky has a rather mechanistic view of language, for all that he understands that the freedom to compose sentences that are original, unpredictable, and yet intelligible is different from the unoriginal, predictable products of strictly mechanical action. His view is mechanistic nonetheless because he simply posits underlying structures by which sentences are to be generated. Possibly in a wider perspective, Chomsky is no more reductively mechanistic than a semeiotic neostructuralist, in a wider perspective, is a phenomenalist. For he no doubt admits (or would admit) that the linguistic universals in our brains are not just there, period, but evolved, with the brain's evolution, as chance variants that were 'selected' by the principle of reproductive success. Similarly, the intentions or needs or felt urgencies to speak or to achieve certain outcomes might explain—but only in a context wider than Chomskyan linguistics–why language's generative mechanisms are used in this way rather than in that. But if we focus simply on the linguist's study, as diversely con-

ceived by Chomsky and the semeiotic neostructuralist, then there is this difference: for the one, the teleology of language is excluded from linguistic explanation, while for the other it is the very stuff of explanation. For the one, linguistic phenomena conform to a describable structure of highly abstract laws, while for the other linguistic phenomena exhibit an intelligible if less abstract, more complicated structure. For the one, the system is a given, and any changes in it are accidental, while for the other development is essential to language—development is more the reality than is any one system of rules—and that development is also intelligible and not merely given.

That is the conflict. The reason the semeiotic neostructuralist approach is, if it is successful, superior is that it can be used to explain the very evolution of the brain-mechanism or linguistic capacities and universals that Chomsky can at best describe. That is, given creatures somewhat sociable, exchanging signs as their way of life, then the survival value of their communicating more elaborate and precise diagrams would explain the retention of those fortuitous variations, say, in brain structure that promote exactly such powers of expressible diagrammatization. That is, the principle of this evolution will be itself linguistic, and continuous with the principles of postbiotic, strictly linguistic evolution. The thought here is not unlike that which refuses to postulate linguistic intentions separate from the capacity to exercise those intentions. Just as there could be no desire to speak without an ability to speak, so also there could be no evolution of linguistic capacities—even, or especially, at the physiological level—except among those who, already speaking to one another, will more likely survive as a species if they speak more effectively. Thus, instead of a neurophysiological explanation of language, we have a linguistic explanation of the higher cortex (and probably not just the speech centers either, since so many of our capacities for sensation and action would be bootless without our capacities for speech).

Irony as Paradox

Finally, as the third example deriving from personal experience, here is what ought to be said about irony in general as well as a species of paradox. I recapitulate here my late wife Marianne Shapiro's analysis **(הכרבל הנורכיז)** as it appeared in our book, *Figuration in Verbal Art*, to this day the best ever written on this important topic (Shapiro and Shapiro 1988: 3–22).[14]

[14] Editor's note: Copyright transferred to the author.

Since irony is linguistically self-referential, even as a figure it is the rhetorical procedure whereby texts can best be made indifferent to verification by anything outside themselves. Another rhetorical ploy, the pun, contains *in nuce* the terms incorporated by irony in the large. Puns are icons of spurious sense. Rather than defining words, they establish an apparent power for them while playing with specious equivalence relations. These in turn are the result of a random juxtaposition of sounds. The only assertion contained in a pun is that one word can at random sound exactly like another one, allowing words to seem like images of each other—iconic rather than symbolic. Due to its final emphasis, by analogy, on the fact that signifiers in literary fictions do not assert anything, the "iconic" syllogism based on punning could contain the following premises: 1) literature does not assert anything; 2) icons do not assert anything. Therefore, literature is predominantly iconic. Because the pun and the iconic fallacy are both essentially rhetorical, a hermeneutic approach to a literary work can displease a confirmed ironist in the same way as the tedious explanation of a pun would spoil the punster's fun: as a disruption of style. (In fact, a performatively oriented view of deconstruction might be that it has its purpose in keeping the daily business of "literary" study going as stylishly as possible in difficult times. That view would cohere with the sense of irony as it was first interpreted: as a totalizing rhetorical mode of behavior, which is by nature antagonistic to hermeneutics and interpretation.) In practical terms, ironic style allows everything not covered by dualism and oxymoron to be smuggled into discourse through the back door of implication.

Saussurean dogmas of arbitrariness have led by tortuous routes into a critical and epistemological impasse where literary theory is concerned. It is tempting to speculate about what course the history of theory might have taken had Saussure been aware of the seminal writings of Peirce and of his triadic conception of the sign. The areas of their agreement only make the fundamental differences more striking. Whereas Saussure barely exceeds the confines of linguistics proper, Peirce does not formally enter within them. Most important to the possible supervention of irony by semeiotic is Peirce's acceptance of mediation—as, in general terms, the third part of the sign—and, hence, of the mental element or interpretant. It is a conception that abandons the hope of immediacy (and the concomitant distress due to the lack of it), acknowledges that the possibility of error is unavoidable, and that the escape from skepticism is distant but possible. It is paradoxically the discounting of sheer intuition that helps to dispel its mystery and, with it, the reverse: the mechanical chains of

causality implied by binary models.

In its most general form the triadic relation is described in terms of three categories. Peirce (1904: CP 8.328) defines these as follows: "Firstness is the mode of being of that which is, such as it is, positively and without reference to anything else.". This category is further definable as the possibility that some quality may be abstracted or isolated in the future (1904 CP 8.328): "Secondness is the mode of being of that which is such as it is, with respect to a second but regardless of any third." The here-and-now character of a concrete trait, for example, the color or hardness of a given mineral, is an instance of Secondness. The spatial and temporal placement of anything under consideration belong to Secondness. The main idea of Secondness is opposition and raw existence, set off from other ideas by contrast. The hard facts of experience (such as is meant by "experience that teaches") are examples of Secondness, as is mere contiguity, such as that of something pointing to an object. Proximity between objects without any clarification accompanying the act or state manifests Secondness. Most prominent among Seconds are kinds of limit, boundary, or confine—where something confronts its negation.

"In its essence anything is what it is, while its secondness is that of which it is another," wrote Peirce.

> The secondness, therefore, is an accidental circumstance. It is that a blind reaction takes place between the two subjects... Imagine a magenta color to feel itself and nothing else. Now while it slumbers in its magentaness let it be suddenly metamorphosed into pea green. Its experience at the moment of transformation will be secondness. (NEM 4: 332–333)

When Dante says in the *Vita Nuova* (XXV) that love is not a substance but an accident in a substance, he is saying at that juncture that love is a Second. Much of his further development, including that of the *Commedia*, can be thought of in terms of his revision and enlargement of that idea.

Secondness is inadequate to describe the status of two things when they are combined or mediated by some third. The role in sign function of this binding element is stressed by Peirce's semeiotic in a wide variety of ways and accorded crucial importance (1904: CP 8.328): "Thirdness is the mode of being of that which is such as it is in bringing a second and a third in relation to each other."

This drastically brief expose of the Categories should have yielded up the implied conclusion that Irony is a Second. To amplify

this statement somewhat, it should be noted that for Peirce the object of a sign is a Second and its interpretant a Third. Since the object of a sign is its Second, the relation between them is a Secondness. But the medium of their relatability, or the interpretant—that in which a sign is or would be interpreted—is a Third. A genuine triadic sign relation is not susceptible of reduction to dyadic relations. Every relation involving mind, cognition, or intelligence is genuinely triadic.

As regards the most general level of ironic argument about literature and the division of literary study between purportedly "subjective" and "objective" goals, or between synchronic and diachronic investigation, it is of potential usefulness to take into account the demotion of the (writing) or (reading) Subject that could ensue from the application of Peircean semeiotic. For Peirce, human mind is a special case of semiosis, rather than semiosis being a special case of mind, or subjectivity. For Peirce, we are in meaning, not the other way around, just the way a body is in motion.

The understanding of irony as a Second in Peircean terms facilitates our placement of it outside of the scheme of genuine interpretants, which are Thirds. Since in ironic discourse the sign and its object are exactly the same, it would be tempting to regard it as a complete interpretant—whereas it is at best a stimulus to interpretation: a spur, a context, and an impetus. That is why irony belongs to another fundamental Peircean grouping that clearly displays its Secondness: that of indexes, as distinct from icons and symbols. The relation between sign and object is indexical when it is defined by a spatial, temporal, factual, or existential contiguity between them. A sign is an index if related to its object through its dynamic action upon it. A proposition and its ironical superstructure instantiate that relation. Among Peirce's examples are weathervanes and the legends to be found under portraits.

In *The New Elements of Mathematics*, Peirce makes it clear (NEM 4: 254) that the essential function of a sign is best fulfilled by the symbol. While icons and indices remain "fitted to be signs" even if they go uninterpreted, "a symbol is defined as a sign which becomes such by virtue of the fact that it is interpreted as such." A symbol depends for its being on becoming determinate through interpretation. The crucial connection between the symbol as a species of sign and the interpretant is thus established. The interpretant is not only the determinant of the symbol, it is also that part of the semiotic triad (of sign, object, and interpretant) that allows symbolic representation to occur. The relevance of interpretants to literary theory emerges first of all in the incorporation of the third, or mental element, as not only

intrinsic but of primary importance. By that principle the very difficulties encountered in interpreting nondiscursive fictions—such as certain contemporary lyrics—can themselves be seen as part of the symbolic process.

Peirce (NEM 4: 447) makes a further characterization of icon and index that helps to explain their contemporary prevalence as stopping points in literary theory. "An icon has such being as belongs to past experience. It exists only as an image in the mind. An index has the being of present experience." Irony, which is a Second and an Index, of necessity acts upon a preexistent work or proposition. We do not analyze works that do not yet exist, or potential works or statements. The symbol, by distinction, has its being in the future (NEM 4: 261): "A symbol is essentially a purpose, that is to say, a representation that seeks to make itself definite or seeks to produce an interpretant more definite than itself."

But irony, which focuses upon the material part of the literary sign and imposes a negative upon its propositional value, could be termed a special kind of index in a Peircean typology (NEM 4: 242): it is "an index which forces something to be an icon", and in so doing, "does make an assertion, and forms a proposition." To stop here at irony as a condition on interpretation: that is exactly what it does, turning a work toward its iconic aspect and making the new assertion of the negative.

We know of centuries of writing which is currently labeled "literary" but was once considered across the broad fields of grammar, rhetoric, poetry, history, and moral philosophy. Perhaps those devoted to the study of written fictions as such have now to search for other ways in which textual inquiry could supersede the notion of literary study as a thing in itself. Within this framework irony would be considered as generally episodic and accidental, not essential. Such a criticism would strive again to relate writing to other forms of sign and would read with a justified hermeneutic energy. The renewal of such an enterprise is already evident in a contemporary revival of hermeneutics. Theory will then cease to contradict blatantly what so many kinds of readers actually do and what is borne out in partial ways everywhere. Diachronic and synchronic perspectives would have to answer to each other: the most effective alternative to choosing one's own road to irony.

In this connection one recalls that the necessary external, collateral experience brought to bear by an interpreter of irony is not in the interpretant itself, but in its object. Whereas in a genuine linguistic trope there would be the necessary presence of an interpretant, in irony there

is only a pragmatic strategy on how to deal with a single meaning unit or series of such units. This lack coheres with the external focus of irony, including its purely rhetorical elements, which signal attitudes (however inclusive) toward message, content, or addressee.

This is not to undermine the fact that irony is an essential rhetorical strategy, one that conceptualizes relations as things so as to "make them present" (in just the sense that Deconstructive critics have attempted ultimately to subvert). Like other basically indexical signs irony tends to direct exclusive attention to its object or isolate it instead of merely exhibiting it (as icons do). This kind of sectioning off is an inevitable concomitant of literary analysis, and its hierarchical position in such inquiry is chiefly determined by the degree of formalistic enclosure undergone by the text. Rhetorical strategies are essentially confined to this subsidiary role. But irony alone points to an absence on both levels: from the standpoint of language use and from that of interpretation. It can mask either the judgmental nature of what is being paraded as fact or the inefficacy of an effete judgment.

The elevation of rhetorical strategies, cues, and signals restricted to the negativizing of propositions to the status of genuine interpretants is what ultimately robs ironic deconstruction (understood programmatically) of power either as interpretation of literary history or as prescription for critical practice. What it does finally produce is the convenient rhetorical fiction of a critique that allows you not to deal with value at all. And it is just this utter disparagement of value in contemporary humanistic studies that is to be adjudged the epitome of paradox.

Postscript

Thelin (2014) has many interesting and truly innovative things to say about Zeno, of which I want to single out the following (2014: 210–211) on Peirce on Zeno: "Peirce, although he said about the paradox of Achilles and the tortoise that 'this ridiculous little catch presents no difficulty at all to a mind adequately trained in mathematics and logic' ([c.1911:] CP 6.177), turned to Zeno's paradoxes repeatedly. Like Russell he tended to see their contradictions as a problem of the arithmetical continuum alone. Accordingly, he saw a solution to the problem posited by a finite continuum of an infinite number of finite distances in an arithmetical calculus by long division or a 'rule for the summation of geometrical progression' ([c.1911:] CP 6.178, 180). He frankly admitted the 'difficulty of the arithmetician who is awkward in finding an appropriate expression of that which Achilles does without the least embarrassment'. Apparently, the difficulties that present themselves along these lines are not that easy to overcome after all. That Peirce's first statement was somewhat precipitate is evident not only from the complications

he encountered but also from his readiness to discuss an alternative solution ([c.1911:] CP 6.179). The latter is presented as a 'simple reflexion', but I consider it, in fact, to be *one of the most important ideas Peirce ever expressed on continuity and time*. The idea is simple, indeed, but brilliant when adopted by a perspectival theory of time. By suggesting a system of coordinates he introduces not only a potential hierarchical distinction between continuity (the x-coordinates) and finiteness (the y-coordinates) but also a potential perspectival interpretation of this distinction: 'series might be endless in respect to its succession of members and yet very short in another respect'. Peirce is not aware of the temporal-perspectival potential of his suggestion, and, still tending to a solution in terms of properties of a geometrical series, does not identify continuous motion with the *x-axis*. On my interpretation, the 'other respect' (viz. the *y-axis*) is added (in a hierarchical-processual sense) to the 'first respect' (the *x-axis*), namely in the way homogeneously segmented (preperspectivized) continuous motion is manipulated upon by the stable instrument of temporal-perspectival analysis. In favour of this interpretation is also the fact that Peirce ([c.1911:] CP 6.182), like Aristotle … refers to the *potentiality* of segments as a way to reconcile them with continuity: 'Of course, there is a possible, or potential, point-place wherever a point might be placed; but that which only *may* be is necessarily thereby *indefinite*, and as such, and in so far, *and in those respects, as it is such* [my emphasis], it is not subject to the principle of contradiction'. Accordingly, preperspectival, homogeneous segmentation should be viewed as *indefinite*, i. e., as the preliminary structuring of continuous motion, preparing for its *definite*, heterogeneous segmentation through temporal-perspectival manipulation as part of change-of-state and cause-effect analysis." See fn. 3 below for the standard abbreviations used in citations from Peirce. Cf. Nesher (p.c.): "I think that we encounter paradoxes when we start from accepted assumptions and reach, let us say logically, their opposites, e. g., Zeno, Epimenides, Russell and more. Following Tarski I suggest that when we reach a paradoxical situation we have to make revision of the assumptions which lead to it, the epistemology we accept. Thus Zeno uses wrong arithmetic that assumed that the continuum is composed from dots, yet dots are signs and size-less which cannot compose any physical size. Newton knows better the mathematics of physical motion, e. g., of the arrow moving from the bow. This epistemological distinction between signs and objects is violated by Cantor's set theory which consider sign-numbers, our signs we use in counting, grouping and measuring, as if they were objects, members of sets, and the outcome is his scholastic mathematics which Russell found to be its paradox when he showed in his letter to Frege (1902) that his epistemology of mathematics cannot hold. This is actually the distinction between Nominalism and Realism when the first considered mathematical and other signs as objects we represent by our reasoning . The problem with the Liar Paradox is the metaphysical Realist theory of truth as I discussed in my book *On Truth and the Representation of Reality* (2002: v), namely, that every well-formed sentence is either true or false without being proved as such." For a handy contemporary guide to paradoxes in a historico-analytical framework, see Sainsbury (2009); cf. Colie (1966) for their use in Renaissance literary texts; and Russ (2004) for a translation of and commentary on one of the classics

of the mathematical exploration, *Paradoxes of the Infinite* (1851) by Bernard Bolzano, whom Husserl called "one of the greatest logicians of all time" (Husserl [1900]: 142; cit. Russ [2004]: 1).

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