Science and Subjectivity

A Fresh Look at Phenomenology and Deconstruction
Enabling Meaning in Cognitive Studies

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Abstract
This précis suggests how a scientifically unique method of phenomenology, one that
describes a field theory of being, might along with deconstruction theory and the
understanding of metaphor, rigorously enhance our ability to do cognitive science.
Cognitive Science is, in a critical sense, a multidisciplinary effort. And this fact, along
with the increasing use of phenomenology as a research tool imposes a burden on its
correspondents to employ a wide variety of terminology, and necessitates
considerable extension and expansion of a highly specialized and presently
discipline-diverse language. Moreover, reference is also made herein to ‘quantum
semantics’, a heuristic that may allow us to deal more definitively in thinking talking
and writing about the cognitive sciences. Quantum holism and a spatio-temporal
electromagnetic theory of consciousness, along with the semantics necessary to deal
with them, are mentioned as potential areas and types of research likely to generate
a bridge theory en route to a comprehensive theory of mind. Reviewed also is the
primacy of modeling with words, and the emphasis of semantics being derived from
natural language, as opposed to a structurally self-limited symbolic logic. By
acknowledging our current lack of precision in meaning as a problem, and
simultaneously increasing our efforts toward the engagement and establishment of a
more comprehensive and definitive semantics, we may expect to glean an augmented
understanding of cognitive science.

Key Words: science, subjectivity, consciousness, mind, cognitive science

Every analysis of the conditions of human knowledge must rest on considerations of
the character and scope of our means of communication.

Niels Bohr, Atomic Physics and Human Knowledge

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Viewed in the light of the theory of computation, the problem ... appears just as perplexing as it does through the eyes of the physicist or chemist. And the difficulties are not purely technical. Thorny philosophical problems loom too. Concepts like information and software do not come from the natural sciences at all, but from communication theory, and involve qualifiers like context and mode of description—notions that are quite alien to the physicist's description of the world.

Paul Davies, *The Fifth Miracle*

Introduction

It is, in my view, both edifying and confusing, to closely read scientific and philosophical texts as they purport to tell us something about cognition. Scholars of all conceivable stripes in both their empirical and intersubjective investigations, speak with anything but a common voice with respect to both the fundamental nature and the finer points of knowing. This lack of a common, universal, or meaning-specific grammar presents a challenge, because it significantly limits progress for scholars who are trying to establish a definitive (though admittedly working) understanding of the mind sciences; thus one who genuinely attempts to dialogue with other researchers regarding cognition as it displays its seemingly potential universal and/or ubiquitous characteristics, attributes, qualities, and dimensions, is severely hampered from the very beginning, the moment he or she attempts to record observances or findings. On the one hand, then, it can be edifying, and somewhat stimulating, to reflect on the many different views and ways of understanding cognition. On the other hand, and unfortunately in large part, it is quite confusing when one is involved in investigative research, and when trying to generate augmented understanding, to encounter in even the best of the literature vastly different versions and beliefs of what precisely it is that constitutes cognitive data. In simple terms a large part of the problem, aside from the complex nature of mentality itself, lies in the combined subjective and objective approaches as they necessarily apply to, and utilize language in its study. The effort is compounded because of the apparent need to engage simultaneously in intra- and intersubjective, and intra- and interobjective methodologies. One witnesses, therein, as one engages the current literature, the seeming transmutation of the already numerous aspects of noesis into endless variations of meaning and ensuing paradigm shifts.

I am led to conclude having postulated the above that scholars seeking meaning would be well served to affect a rededicated effort to establish, at the very least, an academic standard or norm and a more mutually agreed upon terminology and syntactical grammar. One result of my ongoing study is that I have found the (neutral) tools of phenomenology and deconstruction theory to be invaluable in the analysis, reassessment, and subsequent reconstitution of marginal understandings. In my experience many cherished assumptions, when assessed specifically by way of this rigorous critique, quickly dissolve into groundless, undecipherable theories. It is my suggestion, then, that all of the current theories of meaning need to be thoroughly reevaluated, and recontextualized under the unrelenting critique of phenomenology and deconstruction theory.

What follows here, though, is not an active engagement in the massive reshaping of the constructs of reality. That effort, to closely read and critique the literature of meaning, must be undertaken on a much broader scale, and will require a major commitment in terms...
of the investment of time and research capabilities. What this essay will try to provide, nonetheless, is an outline of a proposed method to redesign and reengineer the linguistic and conceptual framework, the terms and definitions, and indeed, the entire paradigm of what we refer to as meaning. Perhaps, if this can be even partially accomplished, we shall encounter a more consistent, refined, and enhanced understanding of the texts, meanings, and implications of what it is that constitutes knowledge.

**PHENOMENOLOGICAL HERMENEUTICS**

The real concern of linguistics is essentially the quest for meaning... to lighten up the thick darkness of language, and thereby of much of the thought, culture, and the outlook upon life of a given community with the light of this ‘golden something’... this transmuting principle of meaning.

*Benjamin Whorf, Language, Thought and Reality*

It will be instructive to first briefly look at hermeneutics prior to focusing on phenomenology as it describes a field theory of being. The science of interpretation is generally called “hermeneutics”, from the Greek hermeneutikos, to translate or interpret, and from Hermes, god of science, commerce, and eloquence. Hermeneutics has its contemporary roots in general phenomenology, or the attempt to discover the nature and meaning of mental acts as mental acts, and not merely as reduced to various objective, sensory, and empirical displays. A sensory-empirical object, e.g., a stone, does not necessarily point to or refer to anything other than itself. But a mental event, a concept or symbol, by its very nature points to or refers to other entities and events, including other symbols, which themselves can refer to yet other symbols, and so on in an intersubjective circle of symbolic meanings and values. In short, a mental act as mental act is what Husserl (1970) called intentional it: has meaning or value because it refers to or embraces other occasions, including other meanings and symbols and values. Phenomenology is an attempt to directly study this realm of intersubjective intelligibilia, not merely the realm of objective sensibilia. And hermeneutics is simply the branch of phenomenology that is especially concerned with interpreting the meanings of these intersubjective or intentional symbols (Wilber, 1984).

If, for example, I want to understand the meaning of a particular thought system, e.g., Tantra, I must not do so in a merely empirical, objective, reductionistic fashion. I must first empathetically understand the system by reproducing or entering its subjective and interpretive circle (the “hermeneutic circle”). Schools differ as to whether interpretation should be empathetic or actually participant (where feasible), but some form of inside understanding and interpretive engagement is deemed absolutely fundamental. The meaning of a Tantric expression is not solely or even especially to be found in, for example, its latent tension management, but rather in its manifest intentionality and its intersubjective acknowledgment. And the way one—as an “outside investigator”—determines that intersubjective meaning is to enter (not necessarily physically) the hermeneutic circle itself, the circle constituted by the intersubjective exchange of linguistic symbols, an exchange that is always set in a particular historical context. Hence the common title: historical hermeneutics. Thus if I want to
understand the philosophical meaning of the word “Tantra” for example, I must take into account the historical context of the symbol itself, because what is “Tantra” to one epoch (Hindu) is not necessarily “Tantra” to another (Tibetan). Merely defining “Tantra” objectively misses its historical referents and thus leads to bad interpretations, bad hermeneutics, axiological bias, etc. (Wilber).

Although I affirm the importance of hermeneutic analysis, it does carry with it certain limitations: a) it requires a willingness of the researcher to immerse himself/herself into the flux of the hermeneutic (intersubjective) circle and b) it employs a radicalization of situational truth and a consequent lack of a universal or even quasi-universal critical dimension, a way to judge the actual validity, and not just the interpretive mesh, of a truth claim (Wilber). For the most part I do not have a problem with these constraints, and I do have stringent “critical” criteria, but I am willing to test each situation on its relative merits so that I do not miss an important learning opportunity. At some point I decide how far I am willing to stretch, and act accordingly. This serves my research requirements in that I don’t reject a project out of hand because it seems too subjective. Others, though, will prefer more of an objective scientific approach. Thus for the balance of this sketch I will focus primarily on the phenomenological aspects of phenomenological hermeneutics. In the end, phenomenological hermeneutics constitute a productive and necessary dyad, but the scientific character of phenomenology itself is likely to appeal to the more empirical, objective (scientific) leaning researcher—hence its emphasis here.

Contemporary Phenomenological Ontology
A Field Theory of Being

The focus here will be to establish a theoretical foundation for the philosophy of mind, cognitive studies and quantum meaning as it is considered as field theory, rather than a mere historical exegesis. Many new ideas have been inspired since Husserl by other phenomenologists, and by semanticists.

In order to understand the semantics of field theory, (transcendental phenomenology; phenomenological ontology; or, pure consciousness) and the dual aspects of being (transcendental and empirical) we need to assess two contrasting versions of thought: referential and reflexive (Koestenbaum, 1978). Referential thought is consciousness directed outward and away from itself. Consciousness refers to objects or points to them in the sense in which a label refers to the contents of a medicine bottle or a word refers to its meaning. Referential thought is patterned on the metaphor of light and vision. It is an arrow or beam that has a point of departure (the transcendental ego) and a destination (an object). “Most thinking is of this sort. Reflexive thinking, on the other hand, is consciousness turned back on itself. Reflexive thought is uniquely philosophical. It is self-referential; it is not the act of consciousness but of self-consciousness. Reflexive thought is an infinite regress. It is thought thinking about thought. The metaphor for reflexive thought is no longer that of a beam of light but that of a mirror; it is not of an arrow but of a coil.” (Koestenbaum). This conscious reflexivity is somewhat of a mysterious process, but it is a process that humans can produce and experience seemingly at will. It may be the key that unlocks the door to phenomenological ontology (pure consciousness), meaning, and all subsequent mental pursuits.

The field of being is described as consisting of polarities; for example the mind-body polarity, and the individual-universal polarity. Being thus is a polarity rather than a thing; a field rather than an object. Being is dialectical; its existence is dynamic and...
becoming (either as life, with increasing foci and concentrations of energy through the evolution of species or individuals, or as entropy, with inert matter and decreasing foci of energy and increased evenness of energy distribution). “And life and entropy can be described as occurring on the model of a field (such as a magnet or a capacitor) which includes both stress and oscillation (which characterizes kinetic energy and wave phenomena)” (Koestenbaum, 1978). Being, then, is a process rather than a stasis, and a field theory of being attempts to assess the significance of these conditions.

Various dialectical views, both of evolutionary theory and of the phenomenological-existential model have been espoused. “What is typical of these thinkers is their emphasis on the process, field theory of being, and their corresponding avoidance of static and reductionist ontologies. The phenomenological method, then, posits being as consisting of a depth that appears in layers, layers that a phenomenological methodology can gradually uncover” (Koestenbaum, 1978).

This model contrasts the mind-body, individual-universal, polarity/field by stipulating that in our culture the body-individual polarity (or medical model/ghost-in-a-machine theory) pays lip service to the mind-meaning/universal. It does not integrate the reality and the nature of meaning fully into either theory or application.

In looking at both individual and collective mind-sets or value systems (paradigms) historically, it would appear that world views have been quite varied and numerous. Essentially though, they have fallen into three main categories; idealism, materialism, and dualism; idealism and materialism each claim to be an ultimate truth, or the only reality; dualism is the position that both consciousness (idealism) and materialism (objects) are real but independent, neither can be explained in terms of the other. The strength of field theory (phenomenology as dialectic philosophy) lies in the insight that the “evidence of unprejudiced and immediate experience discloses the irreducible fundamentum of reality to be a consciousness-object, subject-object, awareness-world continuum. The polar continuities are co-constituted by their permanent interpenetration and interdependence. Husserl would express this as intentionality, while Heidegger would emphasize his descriptive concept of being-in-the-world. Meaning and world or mind and matter are thus in direct touch with each other, are part of one field. The problem of mind-matter interaction does not arise, because it is precisely this interaction that is given in the irreducible immediacy of presuppositionless experience” (Koestenbaum, 1978).

The model drawn from here, (Koestenbaum) discerns three distinct fields which comprise the spectrum of phenomenological philosophy. These are:

1. Phenomenology as method
2. Descriptive—psychological or empirical,
   a. Cosmology: presuppositionless descriptions of the world—nature, science, etc.
   b. Anthropology: descriptions of human existence. Also called existentialism (existential personality theory).
3. Transcendental phenomenology, phenomenological ontology. The description of pure consciousness.

A point overlooked in most versions of phenomenology is its integral character. Phenomenology enables us to be both objective and subjective at the same time. The relationship between phenomenology and science exists on two levels—facts and method. The three basic types of facts (data) are:

1. Scientific data—structure—discrete—objective
2. Poetic/fringe data, process—continuum—subjective and objective
3. Transcendental data—synthetic—a priori—pure subjectivity

The connection between phenomenology and science is significant in that a scientific approach to the study of the person, being, and meaning, is now possible. This model says that a subjective approach (phenomenology) is not the opposite of an objective approach (science) but that both are interrelated variants of a single program for acquiring knowledge. Thus a major step has been taken in bridging science with the humanities and intuition with analysis. This development in phenomenology is a recent one and represents a critical evolution in methodological inquiry. Phenomenology in the past has been a somewhat non-systematic or haphazard enterprise. But now a rigorous and thorough method has been developed. This is especially important with respect to the study of human cognition, in that what has been the basic program—the use of physics as a model for the study of the person as being (scientific psychology)—is increasingly seen as addressing only half of the equation. This is a major point, and one that is being firmly established primarily at present by the humanistic/transpersonal movement in psychology.

Peter Koestenbaum (1978) emphasizes the importance of assessing the method which one is applying, and says that:

“Methodology is the first task of philosophy, and nothing is more basic than how to proceed. Before we proceed with any pursuit we must investigate the way we investigate; and study the way we study; and think about how we think. This is methodology.”

Furthermore, Koestenbaum stresses that there is much subtlety involved in discerning between, and within, the subjectivity, the objectivity, and the combinatory milieu which is being. And that:

“The fact that all knowledge begins with what we have become accustomed to call first person experience is taken seriously by phenomenology and its implications are developed consistently and systematically. We may demand objectivity in knowledge; nevertheless that objectivity itself is in the last analysis constructed out of data which are inevitably subjective. The idea of objectivity itself is an invention of subjectivity. The primacy of subjectivity—a phenomenon which Ralph Barton Perry called the egocentric predicament—does not necessarily lead to subjectivist philosophies or solipsism (the metaphysical position that only I exist). But it does show that concepts such as “objectivity” and “the independent existence of an external world” are constructed out of building blocks that have their origin in first-person experience. Moreover, the first-person experience is mine and not someone else’s. Phenomenology is the fearless development of this idea.”

This method of assessment, rather than become either too objectively or (equally as misdirected) too subjectively biased, requires a precise, systematic approach. Koestenbaum believes phenomenology to be such a method of acquiring knowledge, and offers the following four steps as a particular approach to investigation.2

**Phenomenology as Method**

1. First-person Experience

   - The primacy of the subjective perspective.
   - Represents the starting point in the process of dealing with knowledge.
   - Recognizes that objectivity is rooted in subjectivity.

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2 This is the briefest of overviews. Readers interested in a full account of these methodological steps should see Koestenbaum, 1978, pp. 30-44.
2. Description
   o Of the first person experience. To record the range of data. With a minimum distortion or change.
   o Respects experience as the foundation of knowledge.
   o Has epistemological/empirical roots. Basic access to veridical knowledge.

3. Presuppositionlessness
   o Truth seems to be connected with the assumption-free, and seems to be found when we get past assumptions.
   o Recognizes that culturally assumptions have crept into our constituted experience through science, religion, language, and so forth.
   o It may be difficult to eliminate all assumptions, but we can become aware of them; we can identify assumptions in any cognitive endeavor.
   o The ideal of presuppositionless philosophy reflects the insight that truth is proportional to the assumption-free and, conversely, that error is related to the presence of suppressed assumptions. If we reach truth through description, if the world shows its face to us through the empirical data it gives us, then assumptions are in fact interferences with the pure transmission of these precious primary, primordial, or originary data. It follows that for a radical empiricism, the presuppositionless is also the true.

4. Epoche
   The “cognitive yield” of applying 1, 2, and 3 to the activity of knowledge itself.
   a. Bracketing
      o To take a phenomenon out of the stream of experience and examine it in isolation. To cut a phenomenon out of space and to excise it out of time in order to examine it in leisure.
      o We must be conscious of whether or not bracketing affects the phenomenon under study. In the physical and life sciences from autopsies to the principle of indeterminacy, to study an object is to change it.
      o Phenomenology is closer to photography, in that it does not affect the phenomenon observed. Reality is left intact. It is only our observation that is added to it. Changes are made only in the mind.

b. Reduction
   o To reflect on experience rather than to participate in it.
   o Reflection or reduction is stepping back out of the involvement of the experience. (Reduction in Latin means to lead back or step back.) By extension, this might be compared to Hofstadter’s (1981) “jumping out of (and back into) a system”.
   o This concept, sometimes called the transcendental phenomenological reduction, is perhaps the fundamental step in phenomenology, for Koestenbaum claims that “it is this act which opens up for analysis and description the region of pure consciousness”.
   It is important to note that the reduction here is different than conventional scientific method in that we are aware that we are using reduction; we are doing it for a special purpose; and we are also aware that we are combining this reduction ultimately with the overriding process of expansion, i.e., one goal of which may be transcendental consciousness.

   Phenomenology, particular Kirshenbaum’s refined process, is very similar, and in my view 3 perhaps identical to transcendental methodology employed in many

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3 Represents this author’s exegetic gestalt, and not necessarily Koestenbaum’s, nor anyone else’s.
spiritual, cognitive, and/or mystical self-world/realization practices (e.g., those practices which ultimately transcend method and realize “direct experience”).

Summary
It seems possible that phenomenology, as field theory, might represent an ever-new open ended, dynamic, responsible and integrative way of combining scientific method, subjective process, and philosophy of mind. These syntheses might lead beyond theory as we know it, and could represent thought and meaning in a clarity of light that approximates a truer and more authentic understanding of behavior and cognition. The least of our expectations could be that the questions we ask about thinking and meaning, using the approaches of phenomenology and deconstruction, will be significantly different and more incisive than ever before, and consequently, that the answers derived may have greater relevance. A final caveat, though, which I try to keep constantly in mind regarding not just deconstruction and phenomenological theory, but with any system that tries to break new philosophical ground—to rigorously avoid premature closure. In other words, to avoid, or suspend belief until a reasonable level of apodictic surety is achieved.

DECONSTRUCTION THEORY
‘Then you should say what you mean’, the March Hare went on. ‘I do,’ Alice hastily replied; ‘at least—at least I mean what I say: that’s the same thing, you know.’ ‘Not the same thing a bit!’ said the Hatter. ‘Why, you might as well say that “I see what I eat” is the same thing as “I eat what I see!”’

Lewis Carroll, Alice’s Adventures in Wonderland

It is the writer’s contention that Deconstruction Theory and Phenomenology are equivalent, with minor deviations, in their ability to analyze thought and texts; hence their joint emphasis in this paper. Deconstruction theory is the seminal work of Jacques Derrida (1997) who pioneered and remains the leading proponent of this method of analysis. The method of deconstruction is sometimes misinterpreted. For example, some have felt that deconstruction denies the possibility of truth. This is inaccurate; deconstruction does not deny the possibility of truth, but avoids, to the extent possible, assertions about the nature of truth. Moreover, it is superficially thought that deconstruction questions the value of truth and logic and yet uses logic to demonstrate the truth of its own methods. Rather, the point is that the overt concern of the deconstructionist is the predicament of having to use the resources of the heritage that he or she questions. In short, even though we are unable to fully avoid the limitations of language we must, nonetheless, work within it. Deconstruction as method allows us to employ, to cite just one example, the strategic use of intertextual, intersubstitution of opposites to cope with the vicissitudes of a format which is far from ideal as a communicational codex. Finally, to dispel the common notion that deconstruction is simply a negative methodology which tears down text and meaning and is therefore unproductive, let us consider Derrida’s (1997) own words that deconstruction;

“... is the attempt to locate the promising marginal text, to disclose the indecipherable moment, to pry it loose with the positive lever of the signifier, to reverse the resident hierarchy, only to
displace it; to dismantle in order to reconstitute what is always already inscribed."

In other words, deconstruction is a way that might aid in interpretation, and the seeking of potential insight, in that deconstruction analyzes (loosens up) thought in order to reconstruct, reconstitute, and transform thought, possibly into newer, different, and higher order meaning. My intent in this writing will be to simply draw attention to the method of deconstruction—as an exceedingly valuable interpretive tool. And, though there are an abundance of reference materials that apply deconstruction to the analysis of language, there are few that deal sufficiently with the specificity of meaning vis-à-vis modern science.

One of the more comprehensive texts available on deconstruction, and one which does touch somewhat on contemporary understanding is John D. Caputo's (1987) *Radical Hermeneutics*. In any case, I would urge anyone interested in cognitive studies to engage the existing literature on deconstruction with a view to then possibly contributing some original and significant insight to the field. It would appear that by exercising greater care and more conscious use of language, we can expect to increase our awareness of the inherent traps involved in thinking and communicating and thus find better ways of understanding and relating to phenomenology and cognition.

**The Enigma of Language**

"To understand the work of deconstruction it is essential to first consider the notion of 'sous rature', normally translated as 'under erasure'. To put a term 'sous rature' is to write a word, cross it out, and then print both word and deletion. The idea is this: since the word is inaccurate, or rather inadequate, it is crossed out. Since it is necessary it remains legible. This strategically important device which Derrida uses derives from Martin Heidegger who often crossed out the word Being like this: Being and left both deletion and word stand because the word was inadequate yet necessary. Heidegger felt that Being cannot be contained by, is always prior to, indeed transcends, signification. Being is the final signified to which all signifiers refer, the 'transcendental signified' (Sarup, 1993). There is never a one-to-one set of correspondences between the level of signifieds in language. The process is infinite and circular. There is no final signified which is not a signifier in itself. Meaning cannot be fixed and appears mirage-like as both presence and absence. The substance of the sign is determined by the trace (French—implies track, footprint, imprint) of otherness, which is insubstantial. The sign and its meaning never equate. The sign must be assessed 'under erasure' and is already comprised of the trace of another sign which never appears per se.

Language is also a temporal process. In reading words the meaning is always in suspense, deferred. All signs and meanings are modified by other signifiers, and contain traces of previous signs in the chain. Meaning will not remain fixed and will fold in and out of context after context. This implies that language is inherently unstable. One cannot be complete in speech or writing, in that signs encompass meanings which are scattered, fractional, and at best penultimate. In addition to meaning and in a certain sense the self (since it is created of language, as opposed to language being just a useful device; and, that any talk of "self" must be inauthentic given the ongoing confusion between signified and signifier) as a substantial monad seems thus reduced to a seeming eternal inauthenticity. One could, thus, argue that our present understanding, indeed, our entire project as it relates to language and meaning, once seen through the supercritical lens of deconstruction, becomes, so to speak, an ignis fatuus.
The Provisionality of Speech and Writing

“The method of deconstruction is to read a text so closely that the writer’s meanings are shown to be imprecise due to ambiguity and the lack of contextual consistency in the overall presentation. The context lacks integrity by way of its inherent indefiniteness. The method also employs what Derrida calls the ‘metaphysics of presence’ (he also at times uses the word ‘metaphysics’ as shorthand for ‘being as presence’)” (Sarup). Philosophical analysis assumes an immediately available area of certainty, the theoretical origin and foundation of which is presence. In The Logical Investigations, Husserl (1970) asserted that a major difference existed between expression and indication. The expression, tied to the intention of the speaker, was thought to be the pure meaning of the sign and as such was differentiated from indication, which has a pointing function and could occur without any intentional meaning. Derrida stipulated that pure expression must always involve an indicative element. Indication cannot be successfully eliminated from expression. Signs cannot refer to something exclusively other than themselves. There is no signified which is independent of the signifier. There is no dimension of meaning, which can be isolated from the glyphs, which are used to point to it. If the dimension of non-dependent signified does not exist, Derrida concludes a) that no specific sign is to be seen as reference to any specific signified, and b) that we are incapable of escaping the scheme of signifiers. Taken together these findings suggest that there cannot be an unjustified presence. Deconstruction theory thus rejects the possibility of presence and in so doing destabilizes the ground of philosophical inquiry.4 The sense of a unified definitive ‘now’ is thus denied.

The past, the future and now the present perceptual world as we experience it become profoundly unstable. By confronting the available present (and by definition, the multivariable exegeses of language), deconstruction thus seriously handicaps not only positivism and phenomenology but all attempts to nail down a clear understanding of how, and what we think we know.

Because presence has been assumed, speech has taken on a priority over writing, and this is referred to in deconstruction as phonocentrism. Also, because writing has been considered grossly mediated, speech has been understood as being fused to the moment and place of presence, hence its seeming priority. Many linguists, structuralists, and semiologists have also believed that language should be concerned with speech only, and not writing. Deconstruction methodology suggests that writing is not just an ancillary menace to speech, but is the symptom of mistaken understanding. Thus phonocentrism is related to logocentrism, which emphasizes that the alpha and omega is the Logos, the Word, the Transcendent Mind, and the self-presence of full self-consciousness. Derrida posits that phonocentrism-logocentrism relates to centrism itself—the desire to assume a ‘central’ presence at beginning and end. The need for a center, a justifying authority, allows for hierarchical oppositions. Western philosophy has handed down this stigma to modern linguistics with its constant tension, which

4 I should add a comment of my own about Derrida’s use of “presence”, in that he is often misinterpreted on this point. In my view, Derrida refers to “presence” as that which is thought of as metaphysical, or said differently ineffable, unproven metaphysics: belief in some ultimate “word”; i.e., “presence”, “essence”.

5 I differ with Derrida somewhat in his critique of phenomenology. I think our differences could be eliminated (or perhaps more realistically, minimized) were we to compare notes. It is my understanding of Peter Koestenbaum’s definitive treatment of phenomenology which convinces me of its authenticity as an exegetic tool. Unless and until I find differently, I suspect that Derrida would agree with Koestenbaum, were he to
causes a separation of meaning and word. Key to understanding this issue is Derrida's (1997) distinction between signifier and signified which can only be substantiated if one term is considered as ultimate, and does not require a referent beyond itself to another term. If there is not such a term, then every signified functions in turn as a signifier, in an endless play of signification.

Thus deconstruction suggests that the traditional concept of signifier and signified lies in the phonocentric-logocentric episteme. And that writing is, decidedly, the necessary antecedent of language and should be perceived as a priori to speech. W riting, then, is seen as the undecidable, yet creative element at the heart of all systems of communication “truth”, or “reality” which acts as a foundation for thought, language, and experience. In other words “transcendental meaning” is either true (one believes it to be true, hence, for that individual it is true); or is not true, by virtue of its not being known (believed). Derrida (and myself included) has not yet experienced “presence” (God, enlightenment). So, even though we talk about “presence” we, while not denying the possibility of “presence”, do reject “presence” here now, as it might be considered tangible, substantial, or real. This is a rather difficult point, and some would argue that Derrida is stretching the limits of meaning based on his own definitive meaning of “presence”. I am inclined to go along with him here, although I might equivocate, if more convincing evidence were to materialize. Derrida, I think, would not waver.

Differance

Derrida uses a concept called ‘differance’ which means ‘to differ’—to be dissimilar—and to ‘defer’—to delay (the French verb differer has both meanings). Spoken French makes no phonetic distinction between the endings ‘-ance’ and ‘-ence’; the term records as ‘defer’—to delay (the French verb)

Derrida further demonstrates that in general linguistics privilege is granted to speech as opposed to written language. Voice becomes a metaphor of truth and authenticity, a source of self-present “living” speech as opposed to the secondary, lifeless emanations of writing. W riting is systematically degraded and is seen as a threat to the traditional view that associates truth with self-presence. This repression of writing lies deep in the method of certain Western schools of
ideas which the eternal differing and deferring of writing calls into doubt. Thus Derrida's critique of Husserl, and phenomenology in general, caused him to infer that language is an unending interaction of signifiers. As long as the final signified fails to materialize, signifiers then refer to other signifiers, which yet again refer to signifiers. Thus language is the interplay of differences, which are engendered by signifiers, which are themselves the product of those differences. Derrida infuses into the meaning of differance the sense of deferring. Differance is itself endlessly deferred.

Metaphor
The study of metaphor plays a major role in deconstructionist philosophy, and it is becoming increasingly important as researchers in general realize that language doesn't just reflect reality but to a large degree constitutes it. Rhetoric describes experience and decision making, and language leads us to certain specific types of behavior, and causes us to reject yet others. Metaphor is not only problematic in our use of language in a general sense, but as C. de Quincey (1999) points out regarding the increasing employment of the terminology of modern physics in describing meaning in consciousness, “the metaphor of ‘field’ may be misleading when applied to mind or consciousness”. I would add the emphasis that metaphor is particularly problematic when trying to nail down an understanding of the philosophies of both mind and consciousness.

Language functions as a transforming reagent as information flows from one type of mind-set to another, and is essentially metaphorical. Some would prefer that metaphor be eliminated from highly sophisticated research, but the fact is that metaphoric expressions are inextricably embedded in the matrix of language itself. Derrida, as others, is influenced by Nietzsche, particularly regarding the use of metaphor. Nietzsche (Sarup, 1993) asked

“What, therefore is truth? A mobile army of metaphors, metonymies, anthropomorphisms; truths are illusions of which one has forgotten that they are illusions… coins which have their obverse effaced and now are no longer of account as coins but merely as metal.”

All interpretation has a chimerical quality to it because of the metaphoric process. On the one hand metaphor allows for creativity by way of a proliferation of meanings; while on the other, it poses a threat to clarity due to obfuscation. Any given image has a limitless number of metaphors, and this in itself can

...
cause a double-bind by stipulating one thing while requiring knowledge of something quite different. (Interestingly, many schizo- phenics are obsessed with the literal and shun metaphor as indecipherable.) Metaphors often times blur human communicational interaction and add an overarching responsibility to both interacting parties, but with the recipient or correspondent in particular bearing the greater share of that responsibility. Metaphor, like meaning itself, is universally ubiquitous and thus is, at the very least, the sine qua non of the greater human enterprise.

Derrida emphasizes that “all language is ineradicably metaphorical, working by tropes and figures. It is a mistake to believe that any language is literally literal” (Sarup). John Searle (1995) for example takes Derrida to task for saying that “There is nothing outside of texts” and then replying to Searle's polemic with “everything exists in some context or other”. Searle interprets Derrida to mean that “there is no external reality”, while I think that what Derrida means is that we haven't a language that can accurately describe external reality. Derrida further implies that “Literary works are in a sense less deluded than other forms of discourse, because they implicitly acknowledge their own rhetorical status. Other forms of writing are just as figurative and ambiguous but pass themselves off as unquestionable truth. One of the implications of this view is that literature can no longer be seen as a kind of poor relation to philosophy. There is no clear division between literature and philosop, or between ‘criticism’ and ‘creation’. Since metaphors are essentially ‘groundless’, mere substitutions of one set of signs for another, language tends to betray its own fictive and arbitrary nature at just those points where it is offering to be most intensively persuasive. In short, philosophy, law, and political theory work by metaphor just as poems do, and so are just as fictional” (Sarup, 1993).

Thus the use of metaphor is not only inescapable, but is potentially harmful. One major problematic in the use of metaphor is society's presumptive use of the terminology of war. One defends or assaults a position; we can achieve victory or defeat, at work or play; we attack and destroy an opponent's argument; we shoot down another's suggestions. We routinely employ the language of physical combat. By modifying and refining our use of language in the criteria of our everyday use of metaphor, we can exert a profound effect on our ability to peacefully co-exist, without adversarial conflict, and on a more consistent and authentic humane level.

Summary
The process of deconstruction, while assisting us in our ‘close reading’ of words is not trouble-free, in that syntactic and semantic difficulties having to do with ‘incompleteness’ are constantly encountered. By postulating that there cannot be a realm of the signified independent of the signifier, we open Pandora's box to an infinite array of signifiers that refer not to signifieds but to other signifiers, so that meaning is virtually indecisive. Derrida's example of indecisiveness is Plato's view of writing as a drug, pharmakon. The Greek word means either ‘poison’ or ‘cure’ and, as with a drug, the way it is taken (interpreted) makes a world of difference. Moreover, the term describing the difficulties of hermeneutics and semiotics ('there is no way out') is aporia. The irony (Greek eironeia a dissembler of speech) therefore of deconstruction as critique is that while it challenges the structure and essence of language, it offers as yet no new major understanding of the enigmatic matrix

which constitutes not only language, but in fact our understanding of mind as well.

However, as in the mythic box, hope remains at bottom. The fact is that metaphors do determine for the most part what we think in any field of endeavor, and they are much more than just interesting variations in the making of conversation or writing. They profoundly form the basis of who we are and what we do. They can create or destroy an entire weltanschauung. We should, therefore, at the very least employ the most explicit metaphors possible, because metaphor can and does engender new understanding and stimulative foresight. They can produce unheard of nuanced correspondences and allegories. Metaphor can embody and suggest a thoroughly unthought of way of seeing things. Through metaphor we can generate added awareness of language, world-views, and meaning, heretofore unimagined. (Cf. Appendix for a comment on deconstruction).

While we do not have instant transformation at hand, and even though it may prove in the long run that evolutionary process, by and large, controls the development of an expanded semantics, there is nothing to say that we can’t bootstrap our own cause. One way we might do this is through the employment of deconstruction as methodology. This alone might allow us to unravel the complex skein of the universal (and language soaked) mind. And this would be a considerable step in itself, in that by identifying the sourceal problematics, we may also possibly uncover the tiny yet bright string connecting the paths within the labyrinth, helping us to see our way out and into the open.

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I can’t resist a brief aside regarding strings: With the disparity between relativity and quantum theory now seemingly resolved by new understandings in quantum theory, we now must deal with string theory, which appears to extend the number of dimensions to eleven, and seems to continue and extend holographic theory. We are asked once again to radically shift our minds eye view, and our basic sense of the structure and function, and dare we say it—meaning of the universe. More so than ever before, we must now extend our grasp of metaphor and analogy, if we are to have a ghost of a chance of keeping pace with quantum semantics. It has been said that the act of exploration is not so much one of seeking new landscapes but of fashioning new eyes. For those who are interested in seeing the universe through eyes fashioned by string theory, Brian Greene’s (1999) book is must reading.
QUANTUM HOLISM

It is conjectured that each organism, like a Leibnizian monad, represents the universe, and the universe reflects, in some manner, the organism that observes it. This is reinforced by quantum theory in a way in which space-time and spectral perspectives get reconciled and appear to be no more divisive than the two faces of the same coin.

Karl Pribram, Neuropsychological Investigations

Indra’s Net, Buddhist Allegory

My notion, and call, for what I refer to as quantum semantics, may in addition to its use toward a more definitive reporting process in cognitive and phenomenological studies, also be enlisted to engender new findings and theory in consciousness and neuroscience. I include this brief on quantum holism to point up the necessity of refining our language and our capability to conceptualize in that new ways of studying the mind are creating new theories of its function and capacity.

A distillation of quantum holism acknowledges that the de Broglie wave (with frequency, wavelength, amplitude and phase) is involved in all phenomena in the universe, and that the phase of the wave is most germane to the understanding of the cognitive process (Haldane, 1930). The wave process of de Broglie and Schrödinger can explain the phenomena of both life and mind. Planck’s constant h opens up a bridge between space-time locatable concepts such as mass and undulatory concepts such as energy measured as frequency, wavelength, amplitude and phase.

The notions of entanglement, superposition, non-locality, wave-function collapse, and spatio-temporal electromagnetic field theory of mind are key to understanding quantum holism. Moreover, recent work by Hameroff, Penrose, Pribram, Marcer, Mitchell (Van Loocke, Ed. 2001); Pockett (2000); McFadden (2002) lead one to consider that the philosophical notions of monism versus dualism, idealism versus materialism, type identity theory, rigid designators, structure as opposed to process, and the correspondence theory of truth are no longer relevant, i.e., they no longer do any pertinent philosophical work, because they are essentially no longer meaningful issues or questions. The simultaneity of both the classical model and the quantum mechanical model are no longer dichotomous but true. Indeed what was always seen by many as a narrow approach to understanding, and thus a great failing—analytic philosophy—now atrophies into disuse in view of new insight provided by dynamic holokinetic (quantum holism) theory.

Thus the brain, its environment, and indeed everything in and including the entirety of the cosmos itself may exist as a hologram, or more accurately to use Bohm’s (1980) phrase the implicate order, which expresses a dynamism (holokinesis) rather than a fixed structure. On the basis of such reasoning the brain is seen to be the medium for transformations into and out of a potential distributed energetic and an experienced space-time order (Pribram, 2002). Moreover, holistic cognitive science "gives us a way to know ourselves better, to see how our physical being—flesh, blood, sinew, hormone, cell, and synapse—and all things we encounter daily in the world make us who we are" (Lakoff & Johnson, 1999). This view says that knowledge is embodied and embedded, and that we cannot understand the universe without understanding ourselves, and that we cannot understand
ourselves without understanding the universe. On this point Pribram emphasizes that although he has gained much insight from mathematical concepts, it is a natural language system that is nonetheless required for a full understanding of the mind-brain relationship. He goes on to say that although he relies on being able to provide rigorous definitions for terms used in psychology, this has proved problematic with behaviorists and eliminative materialists. In fact he criticizes cognitive neuroscientists and philosophers for either failing to provide definitions or playing loose by not agreeing on common definitions.¹⁰

Richard Feynman said somewhere that even the most complex theories should be explainable in everyday language. And while I am in general agreement with him, the previous section on deconstruction theory shows that even this supposedly straightforward operation is, to say the least, irony suffused.

Conclusion

I would urge the research community to fully test and employ the methods of deconstruction theory and phenomenological hermeneutics in their ongoing study projects. I feel strongly that these methodologies can measurably assist our pursuits of ways of knowing, and meaning. It seems to me that any serious attempt to push thought, feelings, ideas, images—even written, spoken, or silently said words—toward the direct experience of enhanced being and meaning, is a legitimate and worthwhile method.

Apropos the above, the following should serve as a constant reminder to us of our greater semantic and philosophical responsibilities (Whitehead, 1925):

“There will be some fundamental assumptions which adherents of all the variant systems within the epoch unconsciously presuppose. Such assumptions appear so obvious that people do not know what they are assuming because no other way of putting things has ever occurred to them.”

APPENDIX

The following is excerpted from correspondence with Larry Rinder (November 1999). It shows, I think, how by simply recasting ordinary dialogue, we can engage in semantic experimentation that might possibly lead to fresh insight.

Dear Larry;

This is in response to your query regarding the possible use of deconstruction (Cf. Derrida, Jacques 1997) in the hard sciences. Historically, the methodology of deconstruction per se has not applied in the (so-called) hard sciences. But as I say this, in view of recent developments in semantics, it somehow doesn't ring true. Perhaps it is because certain communicational, linguistic, and semantic changes are occurring. So, let me rethink this question aloud for a moment to see if any new insights may have been gestating. My first thought is that, as I read the current scientific literature, I do not see any formal reference to, or even tacit indication of the use of deconstruction theory. Yet phenomenology is highly regarded and is formidably applied by an increasing number of researchers and practitioners. And, Peter Koestenbaum (1978), a major philosopher, has published extensively on Clinical Philosophy, which is the use of phenomenology (and existential philosophy) as it is successfully applied in psychotherapy. He further indicates was “how undemocratic”, (Pribram 2001).

¹⁰ Pribram says that anatomists have meetings once a decade to decide on nomenclature, and when he suggested this to a colleague in psychology: his response
that phenomenology does, in fact, apply equally as well to hard science. Indeed, upon reflection it seems that we are seeing more quasi-hard and actual hard scientists employing phenomenology in their work. For example, both neurologists and neuropsychiatrists and other medical and research specialists consider their work (in addition to being an art) as a hard science as well, and are employing phenomenological principles in their research and practice. I note, too, that along with the increasing overlap between disciplines, in particular those of neurology, psychology, linguistics, computational modeling and philosophy (cognitive science), we are seeing new (descriptions of) fields emerge such as neurophilosophy as described by Patricia Churchland (1996), and neurophenomenology neologized by the late Francisco Varela (1996) a leading edge researcher in biology, mathematics, and cognitive neuroscience. Finally, and this is the key point; the case is now legitimately made by many that phenomenology is more than just cognate to, but is virtually identical (more than an exceedingly close variant of) deconstruction, both in terms of method and cognitive yield. Others, myself included, count hermeneutics in this genre as well. So it would seem, then, following this very brief analytical review, that it is not by any means a stretch to state that deconstruction theory may be considered “in force” in hard science, in three ways. These are (1) subtle deconstruction (because although it is “used”, no one including the scientist himself is aware of it, and so it is unrecognized as such), (2) not so subtle deconstruction (it is tacitly reasoned, and somewhat knowingly factored in, but is still not yet formally recognized as such) and (3) overt deconstruction (formally applied and utilized, and fully and openly referred to as such). Thus it would appear that the principles of deconstruction are already at play in science, and that perhaps as this notion becomes more widely articulated it might further significantly assist in the advancement of the overall epistemological base.

To further expand this restructured analysis for the purposes of clarification and redefinition, I’d like to look at the above three ways that deconstruction theory might be reformulated and applied in the hard sciences. They are as follows:

I. Visceral Dynamics (Instinctive)
It seems likely that even without exposure to deconstruction theory one may “use”, perhaps even subconsciously, the principles of that method of analysis and inquiry. This is based on the working assumption that philosophical principles (deconstruction being one extended or more refined version of those principles) can be brought to bear even if one is not aware of the formality of the concepts (Cf. Socrates [Undated]) {Jowett, B. Translation & Analysis} who claimed that he did not know anything, but that knowledge was drawn out of him and others by the asking of certain key questions). Thus rational, thinking beings, who have no formal philosophical training will use what are essentially philosophical principles (ethics, reason, critical thinking, value selection, etc.) even though they may not know them by that name. This is done in everyday situations as a form of reality testing/checking, as well as in academic settings; and it is done more or less on “auto-pilot”. For example, as an inchoate youngster, I took certain considered positions regarding religion (agnosticism), ethics (do unto others, etc.) and values (secular humanism) even though I knew nothing of philosophy. Having later developed an active and more
formalized philosophical sense, I found that most of my mental intuitions, inclinations and projections became substantiated and reinforced.

II. Tacit Application (Intuitive)
As our world evolves we are all exposed, some would say overexposed, to information at an increasing rate and to an unprecedented degree. Information technology nowadays saturates the atmosphere with a myriad of ideas, many of which are novel, and many which radically assault, and in fact modify our sense of things. Anyone, whether they are consciously paying attention or not, is bombarded by this new information, to the extent that it can be difficult to sort it all out. Scientists, though, are more adept at assessing new data, and are more likely to genuinely entertain new information. They are also inclined to read more than the average citizen, and so they are exposed to a profusion of new philosophical, scientific, and quasi-theoretical ideas. Some of this data is specific to their field and is readily assimilated into their work. Some, appears speculative, experimental and outright audacious, and is likely to be rejected, or at least not consciously absorbed or incorporated into their work. But, even the most audacious ideas may creep into their professional thoughts, possibly at a subliminal level. Only the individual person can be sure, if he is an accomplished analytical thinker, to what degree any new information becomes a part of his ongoing ruminative process. Nonetheless, I suspect that in many cases scientists read, and minimally entertain new ideas, only to formally reject them as not being pertinent to their field. But, as Michael Polanyi (1975), and Aurobindo (1982) wrote respectively “All knowledge is either tacit, or rooted in tacit knowing”, and “Intuition is but a memory of the truth”. Thus I think that in many instances a reader will file some ideas away, and essentially forget them. But in actuality some of these ideas will become factored into his/her scientific process, even though the scientist is not formally (at least initially) aware of them; nor, thus, does he/she recognize them as such.

III. Conscious Cognition (Overt Articulation)
It seems to me that the central notion in all of this is that of whether or not one is a philosophical and critical “thinker” at heart. If one is genuinely a thinker, then he/she will over time, and as a matter of course thoroughly pursue all available methods of thought. It would seem also that if one is exposed to basic philosophical thought early enough in life, then one will practice that way of operating as an approach to all that life throws in his/her path. For these reasons, and many others, not the least of which is my experientially driven respect for philosophy, it seems clear that there is a preferable route enabling the incorporation of new ideas in the sciences. This route, or method, is to overtly experiment with any and all epistemological systems. As the propounders of the perennial philosophy knew (1972), knowledge which is not tested critically and comparatively against a corresponding component is not knowledge but belief. So why should new language-based theories such as deconstruction, and constructively-conscious semantics not be experimented with? They should. It is lower order science which too easily rejects and rules out a methodology without its being fully tested simply because it is presupposed to be unproductive. Too often a promising method has been overlooked, and a promising system abandoned, which might have perhaps opened new avenues of thought leading to greater insight and meaning. One is reminded of Einstein’s thought experiments regarding relativity (Green, 1999), and W. horf’s research having to do with the relativity of language (W. horf, 1956), without which Bohm’s work on W holeness and the Implicate Order might not have come about (Bohm, 1980; Alford
Whorf's early insight was prescient when he wrote (1956);

“We are thus introduced to a new principle of relativity, which hold that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated.”

Doing philosophy, properly, as it is seen and understood as the neutral tool of inquiry and analysis, in that it does not color—much less contaminate the process, is the best way to test any system of thought and ideas. Without such a process our science will devolve into mere technology, and our understanding of ourselves and the cosmos will continue to be ill defined.

Deconstruction theory, then, becomes for me a conscious and formidable inclusion in my personal and professional philosophical survival kit. I would like to think that the same would hold true in and for the hard sciences as well.

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