

Semantikos: Understanding and Cognitive Meaning. Part 1: Two Epistemologies

Mark Crooks

Michigan State University

Traditional epistemology has had an overriding emphasis since Descartes upon knowing, certainty, and truth, said to be obtained through cogitation. An alternative epistemology would emphasize cognitive meaning, ambiguity, and meaninglessness within a presumptive scheme of *semantiks*, in contrast to the *gnostic* Cartesian model. Thereby cognition becomes naturalized and intelligible within the framework of biological evolution, in which species-characteristic forms of intelligence may be seen to unfold through phylogeny. Both scientific advance and pedestrian reasoning may be fruitfully interpreted by this novel focus upon cognitive meaning devoid of any epistemic function professedly providing psychological or objective “certainty.” Objective rationality as a whole may be seen to emerge solely from the operations of understanding itself within individual and cultural contexts. Suggestions are given as to the structure and dynamics of comprehension that generate species-characteristic forms of cognitive meaning.

“Meaning is wider in scope as well as more precious in value than is truth But even as respects truths, meaning is the wider category; truths are but one class of meanings, namely, those in which a claim to verifiability by their consequences is an intrinsic part of their meaning. Beyond this island of meanings which in their own nature are true or false lies the ocean of meanings to which truth or falsity are irrelevant.”

John Dewey, 1939

Keywords: cognitive meaning, cognitive psychology, epistemology

The following account is intended as the first in a series of essays, providing a bare summary and synopsis (citing highlights) of a radical approach to epistemological foundations, designed to challenge the extant, prevalent one that has arisen since at least Descartes’s time. The contrast between the two views may be put in terms of their respective emphases, namely Descartes’s *gnostic* epistemology versus an alternative *semantikal* epistemology. *Gnosis* in Greek

signifies knowledge and hence the focus of that gnostic epistemology, respecting its analysis of cognition, is upon knowing and certainty. *Semantikos* in Greek denotes meaning or significance, with its implications of meaningfulness, ambiguity, meaninglessness, understanding, and comprehension.

Certain Greek philosophers perhaps were oriented more toward a *semantikal* perspective than the gnostic view, inasmuch as Plato and Aristotle alluded frequently to the inherent intelligibility of the cosmos, a universe discernible by reason, than to any indubitable absolute certainty attainable by dialectic. Nonetheless, this observation can be qualified, given Plato's domain of *eidos* or eternal Forms and Aristotle's "final" and complete knowledge had by his Prime Mover. In modern philosophy, Descartes and Kant are foremost expositors of the gnostic view, with mathematics construed by them — as by Plato — as the exemplar of infeasible knowledge. Hegel's system also portrays an attainment to finalized truth, but this is situated within a broader compass of an *intelligible* (hence *comprehensible*) universe. Probably all philosophers, ancient or modern, who have written on epistemology have referenced both meaning and understanding in varying degrees, as these are folk psychological categories that constantly inform every deliberation on such matters — no less so than the categories of truth, certainty, and knowing. In contrast, it may be argued that epistemology since Descartes is little more than a codification of folk psychology's gnostic proclivities.

Not until the seventeenth century did epistemology shift full-force with Descartes to an outright fixation upon "certainty" as the final end of cognition, said to be consummated through an implicit yet undefined cognitive function called "knowing." Perhaps more accurately and charitably, folk epistemology has it that *thinking* leads — or leads not, per each particular cognitive attempt — to certainty, while *knowing* is usually characterized as the terminus of thought, the grasping and retention of the truth thus achieved, which preceding thought has uncovered. But this progressive *thinking* is no other than *understanding by stages*, as adumbrated below; hence by implication the gnostic folk epistemology willy-nilly shades into the scheme of *semantikos*.

When I first read Descartes's *Meditations*, his most emphatic emphasis upon "Of what can we be certain?" left me puzzled as to what this presumptive cognitive phenomenon of certainty might be. Rather than taking our concepts of knowing and the concomitant certainty as simple givens and then assaying the extent of certainty's jurisdiction, the function of knowing with its predicated effect of certainty might instead be adjudged, asking what might be a naturalistic interpretation. By "naturalistic" is meant an intelligible account of how individual or collective (cultural, scientific) rationality is able to comprehend the world in its various and collective dimensions. The Cartesian perspective is epitomized as follows:

I shall . . . make every effort to conform precisely to the plan commenced yesterday and put aside every belief in which I could imagine the least doubt, just as though I knew that it was absolutely false. And I shall continue in this manner until I have found something certain, or at least, if I can do nothing else, until I have learned with certainty that there is nothing certain in this world. Archimedes, to move the earth from its orbit and place it in a new position, demanded nothing more than a fixed and immovable fulcrum; in a similar manner I shall have the right to entertain high hopes if I am fortunate enough to find a single truth which is certain and indubitable. (Descartes, 1641/1960, p. 23)

Left unaddressed by Descartes and other gnostic epistemologists is *how* reason “apprehends” what is *the* truth localized “out there.” Does that postulated function of knowing enter the essential and intelligible nature of an object or event, thereby becoming “one” with its thought-substance, as in the epistemic naïve realism of Aristotle and Hegel? This type of epistemology seems other-worldly, contrived, unintelligible, and unnatural in its implication of human or infrahuman cognition transcending a presumptive biological evolution. Its intellectual antecedents appear to have been extrapolated from the folk psychology of perception, naïve realism as transplanted to the conceptual domain.

Leibniz argued (e.g., 1712/1973) that though we can successfully explain human actions teleologically *in toto*, we should also endeavor to give naturalistic (“mechanical”) explanations for the actual execution of our behavior as it occurs in the world. By analogy, we might allow that cognition in an ultimate construction is somehow “one” with its intelligible objects, in the sense of a heretofore inexplicable ontological and epistemic conformance of them; yet we should resist the temptation to give “transcendent” explanations for the collective and individual secular development of knowledge. Thus rather than positing innate schemata generating an organism’s incremental apprehension of its experiential world, we recognize that maturation and learning play their roles in that development. This then is the challenge: to explain, naturalistically, how “knowledge” can arise between an individualized, discrete, and demarcated organism and its (relatively) separate environs, and also collectively among persons possessed of reason by communication within an acculturating context. Perhaps it is possible to ascertain the actual cognitive functions involved in these processes of organismic, cultural, and environmental interchange.

Cognitive Meaning Naturalized

It may first be questioned *whether* “knowing” is an actual cognitive function: if it is a real form of cogitation by which an organism “apprehends the reality of its environment” (sensory or intelligible environment) or whether knowing is a fictitious construction fabricated by folk psychology. Taking Descartes’s *Meditations* or Kant’s *Critique of Pure Reason* as paradigmatic, it may be seen that these philosophers did not doubt — notwithstanding the legendary Cartesian skep-

ticism — the actual existence of such cognitive functions as “synthetic a priori judgments” or “clear and distinct ideas.” Their primary concern was to circumnavigate the extent of this knowing, so as to, in Locke’s formulation, “determine the limits of human understanding.” Might there obtain legitimacy or rationale in the attempt to question the gnostic paradigm of epistemology, which emphasizes so strongly the presumptive cognitive function of knowing and its resulting certainty (or uncertainty, if cognitively unsuccessful), and the epistemic inquiry into the “scope and limits of knowledge”? Such a gnostic posit leaves unquestioned the actuality or otherwise of this faculty of knowing with its end result of certainty. What rationale might induce one to challenge the status of these as givens, and consequently to search for an alternative to them in any delineation of a more naturalistic epistemology?

The first reason for a suspicion that knowing is not the fundamental cognitive function, but at best a subsidiary one (and quite possibly a fictitious construct), is hinted at by the epigraph to this paper from John Dewey, on the indefinitely greater extent of meaning over that of verifiable truth. If the context in which Dewey made his point regarding the far greater generality of “meaning” is left aside, a context alluding to the logical positivist verification principle, there is to be found an extraordinary insight: meaning (to be explicated) is the genus to which truths (certain knowledge) are a subclass. Perhaps there is an actual cognitive function that generates meanings, while “understood truths with certainty” are generated by a further, higher-order cognitive determination. At any rate, provisionally, even if there is an actual faculty of knowing — which in its operation gives us certainty — then before one can attain to that status of absolute certainty one must have first *understood the meaning* of the proposition(s) in question. This conclusion may be illustrated by a pair of antithetical statements:

It is raining.
It is not raining.

These contradictories, to an incarcerated person locked in a dungeon, may be completely indeterminate as regards their respective truth values. Nevertheless, the prisoner is able to *comprehend* unequivocally the *meaning* of either proposition, though is not able in some circumstances to *verify* which is veridical. That this is not an unusual example can be seen, if someone is asked, “Was the sun shining all day on 3 October, 1900 in your hometown, or not?” Our inability to immediately supply an unequivocal answer betokens our *uncertainty* regarding the event, but not our unquestioned capacity to *understand* the question put to us (see Frye and Levi [1941] for a similar logical dictum: truth value cannot be assayed and assigned until meaningful propositions are first formulated).

That contradictories may not be determinate as regards their truthfulness, yet completely determinate respecting their intelligibility *qua* propositional content, underscores in a formal fashion the subsuming generality of meaning over verification, indicated by Dewey. The centrality of emphasis upon knowing and certainty by gnostic epistemology is a possible misdirection. Employing Dewey's imagery, if meaning is an ocean, then the territory of "certain knowing" must be seen as small isles against the oceanic background of intelligible cognitive meaning. Why should one fixate merely the figure in any given scenario, rather than its all-encompassing backdrop, as though the latter were conceptually invisible to us? This contrasting generality gives us the first reason for jettisoning the traditional epistemic overemphasis on "finalized knowledge."

The second posit against gnostic epistemology concerns the paradigm's explanatory poverty. If one grants that there were some sort of absolute knowledge (or even *any* form of "knowing," partial or complete), the gnostic explanatory apparatus would cover only those "islands of truth" in an indefinitely larger ocean of meaningfulness. What about the sundry formations of meaning in the myriad domains of humans' understanding, for instance the "meaning" of the Ninth Symphony, the punch line of a witticism, even the perceptual orderings that grant coherence to our sensory fields (a perceptual ordering whose orderly meaningfulness is denied to the neonate).¹

A Schema of Semantikos

Not only is there no comparison between the relative generality of phenomena that can be subsumed beneath "meaning" versus "knowing," but there is further a distinction in their *systematicity of explanatory function*, in Kant's sense of an explanatory "architectonic unity." By this is meant that, by putting our focus on cognition through the lens of the gnostic interpretation (e.g., "What are the limits of the known?"), we pass by that entire field of cognitive meaning within which any ostensible "certainty of knowing" has its existence, and of which the latter is at best (if really existent) only a subclass. Accordingly, much of the genus of meaning is in practice left out of epistemological disquisition, as if it were already perfectly understood. (Hegel, expressing the Socratic method, wrote that it is precisely that which is most obvious — to the point of cognitive invisibility — that is most in need of exposition and clarification.)

By contrast, if we direct our attention upon meaning and understanding, as this is the genus subsuming the nominally existent cognitive function that determines

¹These last variegated kinds of "meaning" are not strictly cognitive meaning, and at present it is left as an open question whether these are all "meanings" in the same sense or are at least analogically sound comparisons. They are cited together for illustrative purposes, as a contrast to the more limited and strictly cognitive domain of "knowing."

truthfulness, our explanatory power increases immeasurably, insofar as so much more phenomena fall within the purview of meaningfulness rather than of certainty, though our epistemic explanatory burden increases commensurately therewith. If we fathom the outlines of the genus, *a fortiori* shall its inclusive species be delineated more clearly in the procedure, per Aristotle's *Categories*.

Tentative terms and methodology may be established for a summary disquisition into cognitive meaning. *Semantikos* is the *cognitive product* that is generated by the fundamental *cognitive process* called *comprehension*. (By way of analogy, there is a proportion between the presumptive cognitive faculty of knowing with its result of certainty, and that of the function of comprehension with its result of meaning.) In actual thought, there is no real distinction between the *act* of comprehension and its *product*, namely *semantikos*. This complementarity of concepts, comprehension and *semantikos*, is introduced for expositional purposes only. There can be no cognitive ordering by comprehension without a correspondent expression of meaning (whether the meaning be conscious or not); and meanings may be partial or complete, relatively coherent or incoherent, as with ambiguity. To emphasize this indissociable nature of comprehension and meaning, their totality is termed *understanding*. Understanding, then, is the total process of comprehension in its act of generating cognitive meaning, as this type of meaning manifests in various contexts, to be explored. Further, the extension of *semantikos* is explicitly delimited to cognitive meaning rather than to (say) "aesthetic meaning" or "emotional meaning." Thus the term *meaning* in English might signify intention, purpose, or significance. It is solely this latter denotation being examined presently, and though in actual thinking cognitive meaning cannot be divorced from emotion or motivation — excepting pathologies — perhaps cognitive meaning may be abstracted for greater clarification of its presumptive relatively autonomous functions within the mind *qua* operative totality. Finally regarding nomenclature, *semantiks* signifies the investigation of cognitive meaning in its various domains, hypothesizing the nature of the process of comprehension that brings the various forms of meaning into being. (By *semantics* is meant ordinarily the analysis of linguistic meaning; here it is assumed that language — both as a means of comprehension and as its product — is but one domain among many within the totality of *semantikos*.)

Above was referenced an "ocean of meaning" within which truth appeared as scattered islands, supposing indeed they exist at all in the absolute sense of an unalterable meaning verified with unequivocal finality. This imagery of ocean and isles sounds much like Gestalt psychology's distinction between figure and ground. The suggestion is not simply an analogy but instead is intended as homology. If we objectively examine our cognition, especially learning as such, what act do we find ourselves engaged in during virtually all its moments? How often does the pole star of "fixed certainty" appear, relative to those times of *understanding*, or at least attempting to come to an understanding? Whether it

is formal learning from a textbook or within a classroom lecture, or in a more informal setting as in interlocution or silent thinking, we are incessantly occupied cogitatively in a process of *coming to understand* — *thinking as such* — not so much *coming to be certain*.

What this continuous *thinking* engenders is a routinized familiarity (in an experiential, not theoretical sense) with the operation of understanding, thought punctuated by salient highlights of *semantikos* characterized by folk psychology as moments of *insight*. When these moments of insight — consummate understanding — are believed to constitute instances of truth, especially after periods of long cognitive search, they become the focus of our riveted attention and admiration (“Just what I have been searching for!”). Accordingly, we may discern here the rationale for Descartes and the other gnostic epistemologists’ fixation upon the question, “Of what can I know for certain?” We have before us at all times the field of understanding, which so monopolizes the cognitive functions of thought to the extent that it becomes invisible to our apperception (cp. the perceptual phenomenon wherein a stabilized retinal image quickly fades from vision). The only thing that stands out in relief against that transparent meaningfulness — barring ambiguity or outright meaninglessness — are those instances of confirmed (validated) meaning that we have been searching for. Within our apperception, “certain knowledge” is the figure against the background of an oceanic cognitive meaning.

How can cognitively global *semantikos* be rendered invisible by a *gestalt* of *truth* within apperception? What happens is that the motivational impetus requiring intellectual “certainty” has invaded the ocean of *semantikos*, fixating those figures of verified insight that stand out as prominently visible against the total *semantikos* ground — the ground that gives truths their contextual setting and thereby their very existence *qua* certainty in relief against “mere” meaningfulness. To orient our apperception to *semantikos* would necessitate a figure-ground reversal, in which background became figure and vice-versa. How would we induce such? A good start would be detailed examinations of the various forms of *semantikos*, ubiquitous as they are, asking the question as to how we ever could have neglected the sheer diversity of cognitive meaning in favor of a tiny subclass of its confirmed instances.

Believed and Verified Cognitive Meaning: Semantikal Epistemology

An anomaly appears in our epistemic experience that would contest whether there actually exists such a function as we suppose “cognitive knowing” to be. This is that there has never been, nor is there at present, any body of knowledge, even within science, that can be considered finalized. I am not here repeating the shibboleth that no knowledge is ever complete. I maintain *there is no cognitive function above and beyond understanding that could generate anything beyond seman-*

tikos, a reservation that emphatically includes any supposed “certain knowledge.” To state certain knowledge does not exist does not necessarily imply there ever obtains only uncertain knowledge, insofar as there is no actual faculty of knowing that could generate certainty and whose functional privation would eventuate in a contrary uncertainty. If it were rejoined that, of course, our certainty is always only relative, then we have returned right back to the starting block. What is this certainty — is it an actual cognitive function or a fictitious one — *might it be a contextual expression of semantikos rather than a real cognitive phenomenon in its own right?* If knowing is a species of the understanding, an understanding that represents knowing’s genus, their respective products of certainty and cognitive meaning should also show that same classificatory relationship of superordinate to subordinate.

And what is notorious in the realm of scientific advance, namely that complete and unequivocal understanding is unattainable, surely holds in our everyday transactions with the world, in the sublunary constructs formed by a less exalted mode of understanding. A psychological sense of certainty is surely no guarantee of soundness of conception (or even of perception), even if we should add thereto a Cartesian criterion of clarity and distinctness. Any person might adduce myriad instances in this life where conclusions that seemed intractably indubitable have come crashing down, refuted by further evidence, experience, or logic. Nonetheless, if within science and within our mortal realm there seems to be no cognitive function that guarantees certainty — because by hypothesis there is not even a real cognitive function that could generate a phenomenon of certainty — perhaps there might be one that grants no *absolute guarantee*, but only an *order of probability* to our inferences.

If we assume probable inferences in place of consummating certainties, we may with justification consider junking the very assumption of any cognitive faculty designated as generating certainty, a faculty which appears to do little or no explanatory work anyway and which is probably nothing except a holdover from folk epistemology. In other words, it should be tried whether probable inferences might be generated by understanding alone, shorn of any “confirming function” supposedly carried out or finalized by “knowing.” In this way we obtain simplicity of expression for our hypothesis. There would be only comprehension elaborating *semantikos* in its various forms, and the relative verification or refutation of inferential constructs would admit only of an incomplete veridicality. The determination of relative truthfulness might be given perhaps by some attendant, subsequent, and higher-order function of the understanding itself, which is responsible in a first-order function for the meaningful construct’s original generation.

There are at least three reasons why traditional epistemology has concentrated so exclusively upon the gnostic paradigm when assessing cognition, rather than investigating the nature of *semantikos* — excepting only linguistic

meaning, a major topic of investigation since antiquity — the cognitive meaning that has so much broader a compass and applicability than “verified truths.” This rationale includes: (a) a motivational impulsion, which desires cognitive closure *qua* certainty, intrudes upon our introspective thought, perfervidly seeking and emphasizing “isles of truth” rather than their grounding cognitive meaning; (b) folk psychology’s categories of cognition, with priority given to knowledge and certainty while taking for granted and hence overlooking comprehension and meaning; and (c) superficial naïve introspection seems indeed to divulge a faculty of knowing, a naïve apperception that generated the folk psychological construct of “knowing” to begin with. This last observation deserves further investigation.

Whenever an insight is formed via understanding, whether it expresses profundity or partakes of a more pedestrian character, there is *pari passu* an encrustation thereupon of what may be called *Humean belief*. This of course denotes Hume’s (1739–1740/2000) “vivacity of impressions” that always attends sensory perceptions, impressions that by their very forcefulness determine which of the various conceptions we shall accept as real, or actions we should undertake. (Note that the employment of Hume’s concept does not mean one necessarily must accept his “skeptical” epistemology in which our causal inferences are construed as grounded solely upon empirical inductions.) This means that in actual thought, understanding does not emerge within a situational vacuum; the constructs of *semantikos* are in fact tailored to the exigencies of our environment (cp. William James’s *functionalism*). In the theoretical sphere, meanings as such are value-neutral; it is only in the context of enabling coherence between the organism and its life-world that particular meanings are formed and favored over others. This is where belief comes in, permeating the preferred cognitive construct. Thus for any given meaningful construct we form, there is a relative degree of belief afforded it. A spectrum may be envisioned, from the total absence of belief (because for example the construct is “uncertain,” relatively unformed, or whatnot) to the moment of eureka-insight (“total comprehension”). When naïve apperception looks at cognition “from the inside,” as duly informed by folk psychology, it sees a function of knowing — and this may be taken as nothing other than a composite of comprehension, in its act of generating *semantikos*, followed virtually immediately by an invasion of consequent belief.

Belief’s investing of relatively verified insights — schema — generating *firm* constructs that do not blow away with the first challenge to their veracity, prevents us from relinquishing tried-and-tested interpretations that have previously proven their worth. Nonetheless, insofar as all “knowledge” (understanding) is inherently hypothetical and applicable only within delimited contexts, there must be an operational egress to keep schemata from becoming ossified and thereby precluding more comprehensive and veracious meaning from being eventually attained through further thought. This is where imagination — notoriously vari-

able among individuals — enters the functions of comprehension. Imagination can plasticize constructs when their limits of efficient application break down. Such cognitive adaptation is required either for better accommodation to the facts or to other components of the reticulated totality of *semantikos* (making for internal consistency). Our intellectual economy and equilibrium are in this way balanced between forces of plastic renovation and static “dogmatism.”²

In naïve introspection thus informed by folk psychology we apprehend a singular, unified process of thought, when actually understanding is wholly dissociable from its pervasive assignments of belief. Such dissociation is illustrated by the phenomenon of “uncertainty,” for instance ambiguous or vague “data” (perceptual or conceptual) allowing of multiple and incompatible assessments. It may now be seen clearly, what was intimated above: *there is no actual cognitive function that answers to “knowing,” and as certainty is the presumed phenomenon generated by that fictitious form of cognition, it too vanishes into folk psychology’s gnostic misconception.* Thereby it can be understood why unequivocal knowledge has never yet been produced, individually or culturally. It can be said that, even as our highest expression of rational cognition, scientific knowledge, begins and ends only in hypothetical constructions, this must be the essence of human cognition, namely to understand (generate) continually higher orders of meaning (*semantikos*), yet never to complete that endeavor.³

Knowing and its product of certainty are then fictions properly construed as confabulated delusions, though the origins of these in apperception and folk psychology are perfectly understandable. Yet it should not be left at that, for though there were no actual cognition that determine for all time the veracity of given theories (theory = systematic, explanatory *semantikos* of broad conceptual swath — namely, schema), still it is undoubted that we possess relatively objective knowledge, that is, tentatively verified hypotheses generated by understanding. This is the challenge posed to *semantiks*: to delineate an epistemology of that objective understanding, utilizing reference only to comprehension and *semantikos*, bereft of knowing and certainty. How does such “relative objectivity” manifest by understanding alone? (In furthering the *semantik* thesis, the traditional epistemological distinction in kind between perception and conception becomes attenuated; see below.)

²The common understanding prefers its cherished prejudices to an emotional hardship of questioning, let alone overturning its unworkable dogmas. It appears to be not a coincidence that those who are most ignorant tend to be those who are most omniscient in their own eyes. It is rigidifying belief that constricts both flexible thought and thereby an appreciation of one’s own limitations in apprehending other and deeper thoughts. As Schopenhauer wrote, many people would rather die than think.

³The proposition that “meaning is inexhaustible” (David Bohm) is a metaphysical posit, insofar as the intelligible universe itself is inherently open-ended as to its potential interpretations. And *semantikos*, the understanding of intelligible external relations, is precisely the cognitive phenomenon that is to be investigated through the program of *semantiks*.

Wolfgang Köhler's (1927/1956) *Mentality of Apes* documents evident manifestations of proto-conceptuality by species lower than *Homo sapiens*, especially the higher primates. Such examples of primitive insight, exhibited by even dogs (but not by hens, who dismally fail roundabout tests), imply that "conceptual meaningfulness" cannot be the exclusive preserve of our reason alone, though conceptuality ascends to its relative perfection in our rationality. In the context of biological evolutionary theory, if reason's fundamental cognitive form is *semantikos*, then qualitatively more primitive forms of *semantikos* — hence understanding — must obtain, assuming phylogenetic continuity of intelligence. (This assumption is analogous to that made by Darwin [1872/1965] in *The Expression of the Emotions in Man and the Animals*.) In other words, to avoid the supposition that conceptual rationality, *qua* reason-able understanding, simply emerged full-blown in evolution *ex nihilo*, there should be posited a continuity of *semantikos* from the earliest invertebrates to extant humans. The fundamental form of *semantikos* (to be defined) would remain in a sense invariant through phylogeny, while yet its complexity of expression would be the variable that unfolded in phylogenetic development. Just as Köhler surmised, then, primates' proto-conceptuality does qualify as bona fide insight, though without the depth of cognitive meaning imparted by humans' reason, just as the chimpanzee's *semantikos*-depth is qualitatively superior to the canine's, proportionately as the dog's understanding is to that of the cat's.

Conceptual Meaning

"Conceptuality" and "meaningfulness" (*semantikos*) were used above in an interchangeable fashion. This was not unintentional, for the working hypothesis is that *semantikos* is *conceptual in its inherent nature*. A simple empirical illustration of this is associative agnosia, in which "perception" remains intact while the cognitive meaning of what is perceived is absent within that pathology. ("Perception" is rendered in quotations because agnosia is actually a privation of perception, insofar as perception is normally in-formed by conceptuality.)

Meaningfulness then is conceptual (cognitive) in content, not perceptual as such, i.e., perceiving bereft of concepts is meaningless. Perceptual content is routinely *sublated*, in other words, is made intelligible by being invested with *semantikos* within our conceptual reason. For example, the tones, rhythms, and harmonies of the Sixth Symphony are ordered within a compositional scheme; and empirical data originating in observation and formulated propositionally are "explained" within scientific hypotheses. *Perceptual content, insofar as it is subsumed within conceptuality's orderings, becomes semantikos thereby, precisely to the depth of meaningfulness that is characteristic of the given species' conceptual schema.* For example, perceptual phenomena subserve scientific hypotheses for reason, yet only inform immediate behavior for most other species' "mentation."

“Conceptuality” signifies here the overall ordering among all domains of *semantikos* within an individual psyche, inclusive of perceptual and memorial contents. Thus presumably conception is phylogenetically as old as perception and motor functions — it may have facilitated their earliest coordination to effect coherent behavior. Perhaps from such primeval beginnings of sensorimotor coordination evolved our conceptual reason, which is able to coherently order abstract relations and transformations among memory, drive, and perception as well as other psychological functions. Conceptuality represents that total ordering of the contents of mind; what is usually termed “conceptuality” is but a sub-field thereof, denoting that abstractive capacity that we *qua* rational humans consider clairvoyant and generalized thinking. This more limited construct called conceptuality is thus a circumscribed (though highest) expression of the more fundamental total order of articulated *semantikos* informing our conscious reason. The conclusion is that cognition (as reason) may be seen as arising not fully formed in evolution without phylogenetic precedent, but as an extension in kind of a proto-conceptuality that had its earliest glimmering on earth with the emergence of the most primitive nervous systems.

A Continuum of Cognitive Meaning

If, by hypothesis, understanding is the true ground and essence of cognition, then when the “limits of knowledge,” “objective knowledge,” and “certain versus uncertain knowledge” are spoken of, this must be misinterpreting the nature of thought because of folk psychology and philosophy’s distortions and categorical impositions on our introspective interpretations of conceptual thought. To set the picture aright, this speech and its references should be transposed from the gnostic system to the *semantikal* paradigm. Accordingly when it is said, “There is no knowing,” this does not signify that there is only uncertainty, for such implies an acceptance of the certainty/uncertainty dichotomy. Rather it should be said, “There is no actual cognitive function that determines certainty to any degree.”

An objection arises at once. “It is not sought to apprehend merely *cognitive* meaning — there is sought in science and elsewhere, *confirmed* meanings. Not merely *to understand* in a bald sense the particulars of competing hypotheses, but to *know* which of those meanings corresponds to reality — *that* is what Descartes and science itself are getting at.” This objection confuses the issue. There is indeed objective knowledge but it comes from an actual cognitive function of understanding, not through a fictitious one of knowing. The confusion arises by continuing to assert the very folk psychological categories in question — a *petitio principii*. What folk psychology calls *knowing* may be characterized as *understanding within a context of relative confirmation and objectivity*.

Gnostically construed, there is a spectrum of cognition that ranges from nescience (ignorance) to uncertainty thence to certainty. *Semantikally* considered,

that spectrum runs from meaningless to ambiguous/vague and thence to meaningful. Insight represents a moment of maximal ordering of meaning; its parallel distorted gnostic formation is “certain knowledge” as the outcome of “coming to know.”

The phenomenon of *semantikos* was contrasted above to its fictitious foil of certainty — but what is cognitive meaning’s intrinsic and essential nature? A term may be taken from Gestalt psychology, emphasizing the formation of relatively coherent and global constructs that, *qua* totality, subsume and order constituent *gestalten*. For example, in visual perception, these *gestalten* are sensorial, while in conception the *gestalten* may include not only sensory forms but also more abstract kinds, including memorial and inferential contents. *Semantikos* is the cognitive representation of an ordering of conceptual (or sublated perceptual) *gestalten* into a relatively coherent scheme. When this ordering transpires at a high level of conceptuality, it is known as *insight*. A relative lack of coherence among the inclusive *gestalten* is termed (and apperceived as) ambiguity or incoherent vagueness. A complete absence of initial ordering, or a subsequent disordering of formerly ordered conception, is apperceived and expressed as meaninglessness — of which it may be presumed that there are as many degrees as there are of meaningfulness and ambiguity.

Semantikos has a hierarchical structure comprising various levels. Three generic forms that may be analyzed are *semantemes*, *schema*, and the *reticulate* or worldview. A semanteme is the elementary unit of meaningfulness within this hierarchy; it consists of a relatively segregated construct of cognitive meaning (concept) that is homologous to a delimited percept within the visual field. The scheme proper is the next subsuming level of meaning that encompasses semantemes and structures the “contextual meaning” thereof; such schema *qua* discursive universes comprise the various domains of *semantikos* (e.g., forms and means of understanding as language, humor, music, and scientific models among others). At the apex of cognitive meaning, the reticulate represents the totality of *semantikos* structure within an individual mind, i.e., the implicit articulation of all universes of discourse — the reticulate is the “total meaning” that constantly informs thought, a reticulated totality always implicitly accessible in its aggregate to one’s conscious purview.⁴

Metaphorically, comprehension as the impelling power of thought “moves through” the implicit totality of meaning at every moment of cogitation, even if only a fraction thereof is available to our conscious attentive focus at a given

⁴Regarding such accessibility, in linguistics it is a commonplace observance that there is an indefinite number of reasoned and reasonable responses that can be generated from an equally indefinite number of questions asked about mundane topics. This represents the capacities of schemata informed by the implicit whole of their subsuming reticulate, i.e., by the vast repertoire of past learning — articulated cognitive meanings — set within an inexhaustible engine of plastic inferential understanding.

moment. By means of this omnipresent totality of *semantikos*, a lifetime of learning can be brought to bear — sometimes serendipitously — upon an immediate perceptual content to “fathom its deepest meaning.” Thus Archimedes cried “Eureka!” upon witnessing a “mere” rise in bath water level, in which that visual (tactile?) percept was sublated into a solution of the problem of specific densities.

Inherent in the structures of *semantikos* is a complementary dual nature. *Articulation* denotes that ordering in which each *gestalt* element “receives its due” in the functional whole (scheme) that it helps to form. *Integration* designates that mode of ordering that is “dictatorial,” in that *gestalten* are force-fit into the scheme’s relatively rigid parameters. Any and every given construct of *semantikos* is both articulated (in its origination) and integrating (in its subsequent state of dynamic equilibrium). This means that when an instance of cognitive meaning (at whatever level of intelligible depth) is first generated, all the *gestalten* contributing thereto “donate” their individualized warp and woof to that systematic — schematic — unity established among them. After that coherent *semantikos* (concept, scheme) has solidified into a semi-permanent state of equilibrium comprising the constituent *gestalten*, further “incoming” perceptual or conceptual *gestalten* are “interpretively channeled” into that relatively fixed framework. All structures of *semantikos* admit of this articulate/integrate duality, including the reticulate itself. The qualification of “semi-permanent” alludes to the ever-present potential function of re-articulation, namely, to reorder extant *semantikos* at any level by busting up those fixed equilibriums through acts of re-creation or re-articulation called *creativity* in the vernacular.

Scientific Semantikos

This formulation as to the nature of creative reordering can be applied to mundane reasoning, insight, rationality, and scientific advance. It was indicated above that if *semantiks* were to be a viable epistemology counterposed to the traditional gnostic one, it needs to be sufficiently explanatory as regards cultural and individual cognitive phenomena. In Kuhn’s (1970) *The Structure of Scientific Revolutions* there is distinguished the stages of hypothesis-formation, consolidation, stagnation, and eventual overthrow of scientific paradigms. Often the initial impetus to overthrow established theories comes about through recognizing confounding and intractable anomalies. Ptolemaic astronomy degenerated into a fixed universe of discourse that held incontestable sway over the empirical astronomical data (articulated semantemes) in its throes. Ptolemy’s discourse represented the function of *cognitive integration* (interpretive force-fitting) at its most hidebound, known pejoratively as curve-fitting. A creative act of insight liberated those empirical facts from the closed dynamics of its paradigm, and by that act of re-articulation established a new contextual meaning for those

facts, namely, heliocentrism. (More generally, the ousting of geocentrism paved the way for re-articulating the more superordinate Medieval *Weltanschauung* that subsumed Ptolemaic astronomy's strictly astronomical universe of discourse.)

Kuhn (1970, appendix) struggles to account for the transience of scientific knowledge within an implicit gnostic epistemology. For example, it may be asked that if the entire series of scientific paradigms is incomplete, how would objective knowledge ever become attainable. With *semantiks* this poses no problem, as the inherent open-endedness of cognitive meaningfulness, read into and out of the intelligible universe (cosmos), is admitted as inherently inexhaustible — re-articulations are necessarily forever. Nevertheless one is obligated to account for the relative objectivity of verified universes of discourse, construed solely as *vindicated semantikos*, devoid of fictitious certainty.

How is *relatively objective understanding* possible, given that there would be no ulterior truth-determining cognition above that of understanding? J.J. Gibson (1966) showed that perceptual ambiguity is made perfectly determinate in the real world of organisms by multiple views of an object generated through locomotion and orientating movements of the head and sense organs. In these contexts, the perceptual best-fit of a given scenario before us is a function of "squaring" (disambiguating) the sensorial *gestalten* by means of multiple views (cf. Helmholtz's "perceptual inferences": percipients tend to see the most likely case of what is actually out there [Gregory, 1970]). In particular, the cognitive map (Hochberg, 1964) would be an outgrowth of such individual perspectives within one organism, a implicit higher-order mapping (perceptual schema) of the percepts' collectivity that informs current behavior. By extrapolation, there is posited a parallel function for cognition, whose *gestalten* are abstract rather than concrete, yet whose *modus operandi* has a common form with perceptual organization. It may be said that cognitive *gestalten* are also most efficiently squared to bring about maximal coherence among them — the most meaningful consilience thereby being effected.

The Form of Semantikos

Comprehension, *qua* ordering principle, tends to generate maximal coherence among constituent *gestalten*. This is an allusion to the *form* of that process, which is subsequently embedded in the structures of *semantikos* generated by the process of comprehension, the resulting cognitive meaning showing an imprint of its generative cause. But what is this form? A hint is given by the nature of percepts' mutual coherence and harmony, epitomized in the structured visual field. In Gestalt psychology, the various forms of perceptual organization (usually numbered at six) are grouped under a *minimum principle*, termed the law of simplicity, denoting the simplest ordering assumed by percepts (sensory

gestalten) in a phenomenal sensory field.⁵ *Simplicity, coherence, consilience*, and like terms bespeak that phenomenon we observe in all our cogitation, namely, a tendency of thought toward an economy of ordering, whether in language, perception, or hypothesis formation.⁶

But if coherence of *gestalten* is the essence of both perception and conception, this implies a more fundamental type of ordering at the bottom of them, contrary to the traditional epistemic distinction in kind between them. Indeed there should be posed a question mark regarding the routine interaction of perceptual and conceptual modes of ordering, which unthinkingly is taken for granted. For where is there any connection or interaction that must necessarily obtain between concrete sensory fields and abstract cognitive paradigms? Simply because of perception and conception's habitual inter-pervasion throughout our experience, their mutual implication appears so natural as to be unquestioned. A more penetrating suggestion might be that they share a common substrate of ordering that allows the reciprocal in-forming of percepts and concepts and girds their cross-pollination. As examples, visual images *qua* embodied cognitive meaning can "mean" grand solutions of theoretical problems to the receptive creator (Koestler, 1964/1967), and similarly, Einstein cited vague kinesthetic sensations as mediating his insights.

By hypothesis, then, perception and conception would share the same ordering function (minimum principle) but as different expressions thereof, namely, differentiated applications of that common form of ordering adapted to specific contents or to those contents' complexity (sensations versus abstractions). It might be possible to extrapolate from perceptual orderings' form to that of conceptuality's, using this assumption. Once these parallels of form were so established, the "specific conceptuality" of a given species might be mapped into its various proprietary domains of *semantikos*. For instance, our reason manifests a *specific* conceptual capacity that is "one" in expression throughout all the domains of "its" *semantikos*. Reason has a given intellectual subtlety — indeed profundity — that it may train on any subject within its purview. Thus music, speech, and conceptual comprehension share the same depth of cognitive meaning, which lesser species intrinsically cannot understand.

The exemplar of our comprehension's organizing process, operating within the many universes of discourse constituting reason's dominion, is *insight*. Reason-able insight manifests most familiarly in the context of hypothesis formation. Perceptual data may also play a part in inducing the formation of such

⁵Certain of Gestalt psychology's theses, as with Köhler's theorized psychophysical isomorphism, are outdated or disproved but this does not touch its still-valid laws of perceptual ordering, which are being used here to suggest a parallel nature of conceptual ordering.

⁶Poincaré (1905/1952) assessed hypothesizing in this light when he asked how it was that out of all possible hypothetical scenarios, we tend to alight upon only those few that are maximally "attuned" to the problem in question.

conceptual meaning, and would represent the sublated empirical content and referent of hypotheses. There is even “motor-insight” as when a musician “in a flash” has finally coordinated the playing ability of a difficult passage, a skill that is implicate with a global matrix of music comprehension. (Contrarily, the sensorimotor coordination of a baby first learning to walk is of course not a reasonable expression of insight insofar as its reason lies undeveloped; such an attainment would nonetheless constitute a genuine instance of early “ontogenetic insight,” which means there is no reason-able sublation of the skill.) These expressions of rational insight show one common *formal* capacity of reason’s ordering that invests motor and perceptual content. Within the various sciences, that common conceptual purview is too clear to require elaboration, as for instance insight in chemistry is no different in kind from that in physics, respecting its nature and application; the difference lies only in context of application. This common form and meaning-depth of thinking within a given species-characteristic intelligence is presumably akin to what Plato meant (e.g., *Theatetus*) when referring to the one mind that encompasses all the senses, a concept transposed by Aristotle into his *common sense*.

Epistemic Verification

An illustration of relatively objective *semantikos* vindicated by no absolute certainty may be given. Perhaps the most plausible hypothesis concerning Plato’s recounting in *Timaeus* of the Atlantis city-state is the perfectly naturalistic one that identifies it with the Aegean island of Santorin, with its Mycenaean culture (Galanopoulos and Bacon, 1969). Literary, archaeological, geographical, geological, chronological, and cultural evidence seem to converge in favoring that thesis. When such cohesiveness among “the facts” — with the panoply of their various and respective qualitative dimensions — are obtained, it might even be said such consilience is “too pretty” not to be true. In general this signifies that *maximal cross-corroboration of the constitutive concepts (“facts”) determines the relative truth value of the resulting hypothesis*. (In perception, the homologue of this ordering in the conceptual domain would be that maximal coherence among percepts determines the veridicality of the sensory field appearing phenomenally.) It is this relative best-fit that lies behind the plausibility of Occam’s razor and related aesthetic criteria. Such criteria of truthfulness and explanatory parsimony as Occam’s, then, would represent the conceptual expression of that same ordering (minimum-) principle manifest in perceptual contexts. Perception and conception are thus outgrowths of the same “organon” of understanding that has been ramifying into myriad contexts throughout phylogeny and ontogeny. The constructs generated by species-characteristic understanding manifest as forms of *semantikos* — sublated percepts or abstract concepts — at various levels of meaningful depth, in all domains of cognitive

meaning. There may be seen here an intelligible — *meaningful* — and naturalistic explanation of the evolution and continuity of phylogenetic intelligence throughout the biosphere.

The epistemological implication is that the very constructions of understanding, as inherently open-ended, forbid positing any “final comprehension.” In other words, it is not merely a contingent fact that we (science in particular) have never yet attained to any final system of explanation; it is a principled impasse, at least so far as the cosmos itself has no bottom to its intelligible substrate (Bohm, 1981). *Semantiks* can readily explain how relative objectivity can manifest, yet also how it can be overthrown when better models, theories, and hypotheses are developed to overcome anomalies or to attain to greater explanatory compass. The “better” model is such because of its better fit, i.e., the more optimal coherence among its constituent *gestalten*, relative to other models exhibiting inferior coherence. Scientific progress would consist of ever more comprehensive and accurate explanatory consilience, which ultimately must break down at the limits of its conditional applicability. Those intellectual limits are hurdled through so-called paradigm shifts, namely, re-articulations of scientific meaning within or across relevant universes of discourse.

A construct of *semantikos* might correspond to its intelligible object “out there” by dint of a *proportion* (Latin *ratio*, reason) between the internally coherent construct and referent in reality that the construct attempts to map. As coherence approximately obtains among the intelligible *gestalten* within a model, so the coherence between those relations ideally obtains in the real world. There would then be no need for quasi-mystical identifications of thought with its objects, à la Aristotle and Hegel. A conceptual scheme (localized neuronally) and its “object” (intelligible relations) might then be spatiotemporally disjoined, yet still manifest correspondence of some degree and kind between the thought and its intelligible referent, thereby allowing for “objective knowledge.” Their disjunction would also explain why understanding can never be absolute, as the history of science shows, insofar as any and every model can be only a hypothetical construction of reality, not constituting its identity.

There still might be an identity of sorts between knower and known, though. The “pre-established harmony” between mind and world, generated by biological evolution, makes it possible for orderings of cognition and perception to map the most plausible interpretation of a given dimension of reality. Thereby the structures of *semantikos*, generated within the individual and collective understanding, might attain to a proportion among the *gestalten* constituting an interpretive scheme, a *process* and not *stasis* that would proximately parallel the relations had among the facts, objects, events, and processes composing the reality of the situation thus mapped. It may be seen by inspecting the nature of this correspondence that the hypothetical proportions generated must forever be approximate, and unfold through successive historical stages executed by

creative individuals and their culture *in toto*. Again, this is precisely what is observed both in mundane thought and in scientific history.

The above proposals are meant as qualitative and functional-level hypotheses as to the interrelated nature of cognitive meaning, perception, understanding, ambiguity, and certainty, among other psychological and epistemological categories. The data for this interpretive scheme of *semantiks* are obtained from the various universes of discourse, including music comprehension (e.g., closure of tonal ambiguity through key resolution — apperceived modulation), humor comprehension (e.g., irony — the climaxing punchline — as an inversion of literal meaning), and hypothesis formation (all the sciences constituting but one cognitive meaning-type). Once the general parameters of a given species-characteristic understanding were mapped, the depth of cognitive meaning had by that species' understanding in its various ramifications might be assessed by ethologists or cognitive scientists. Thus reason generates the general form and depth of our *semantiks*, while the dog's proto-reason — which generates its specific meaning-world — suffices at most for solving roundabout problems, abstraction of perceptual invariants, and learning reward contingencies through its capacity for operant conditioning.⁷

An equally necessary research program would determine the precise form of this universal mode of comprehension; perhaps it is similar in form to the principle of least-action (simplest pathways) investigated in various inorganic phenomena by physics. Further, its neural isomorphism would be sought using the specified parameters obtained at the functional level of description. Contrariwise, if “knowing” is not a real cognitive function, it will never be found to have a neural substrate. Any attempt to find one would be analogous to curve-fitting astronomical observations into the geocentric paradigm.⁸

Semantiks has the promise of applications to issues in cognitive psychology, just as the non-naturalistic epistemology of the gnostic scheme obviously has no such potential. The cognitive phenomenon wherein a perceptual search space is narrowed by verbal (discursive conceptual) instructions, after which the understanding does not follow a seriated order but rather is attentively narrowed to a *relevant* focus, may be seen as an expression of constraining the parameters

⁷But note that certain mammals' *emotive understanding* reaches almost as deep as ours, as with the dog's virtual telepathic ability to cross the species barrier to “intuit” our moods. This phenomenon directly implies that our vaunted rationality and language add little to an underlying and primeval mammalian empathic understanding reaching great depths of “passion-recognition.” Then again, this recognition capacity does not express “pure” *semantiks* — empathy involves cognitive meaning permeated by a rich emotional apprehension that transcends, by whatever means, reason-able discourse.

⁸If indeed knowing *qua* cognitive function obtains an identity between thought and world, as averred by gnostic epistemology, neural reductionism as with cognitive neuroscience would be impossible inasmuch as thought would not be localized in the brain but rather somehow would straddle intelligible and neural realities.

of *semantikos* — *relevance* is no other than directive and circumscribed cognitive meaning. How such is accomplished might be researched by determining how the understanding, comprising both perception (sensory items) and conception (verbal instructions), is able to circumscribe the total meaning system to bring about focused selectivity. Additionally, transfer learning might be assessed better in light of the question as to how perceptual contents are made interpretable by cognitive investiture of them. Thus, conception and perception's mutual interchangeability (making possible cognitive sublimation of perceptual contents) may have direct application as to how the form of a cognitive structure (a concept or scheme) can be transferred — via contextual transmogrification — between learning situations themselves. In other words, perceptual sublimation and contextual transformation may share a common root within a plastic and transformative understanding. The very function of comprehension is precisely to make the structures of cognitive meaning more mutually informative by their desegregation; to broaden and order more coherently and comprehensively thereby our worldview. Finally, the concept of the schema has had a long and useful employment within cognitive psychology, in terms of accounting for the consolidation of memories — via meaningful ordering — and their efficient retention and recall thereby (Mayer, 1992). By my use of this term and concept, I mean exactly the same phenomenon and functions though put in the expanded interpretive context of *semantiks*. Indeed, the nature of memory as organized within schema may be the best starting point for investigation of cognitive meaning within the understanding considered globally — the memory of learning constituting the meaningfully organized repository of articulated *semantikos* in toto. Learning is nothing else than the understanding in its essential action, generating cognitive meaning, while memory is the organization, storage, and recollection of relevant meaning; relevance is meaning appropriate to a given context of interpretation.

What is needed is not so much “new facts” as the reinterpretation of familiar ones. That means investigation of traditional epistemological problems in light of the phenomenon of cognitive meaning, rather than fixating its subclass of verified meaning as with the traditional philosophers' obsession. This involves an analysis of such cognitive parameters as meaningfulness, ambiguousness, and meaninglessness along the graded spectrum of *semantikos*. More generally, it means recognizing the ocean of intelligible meaning that has always been in front of us at every moment of conscious apprehension, though we did not focus properly and emphasize its true significance.

References

- Bohm, D. (1981). *Wholeness and the implicate order*. London: Routledge & Kegan Paul.
 Darwin, C. (1965). *The expression of the emotions in man and the animals*. Chicago: University of Chicago Press. (Originally published 1872)

- Descartes, R. (1960). *Meditations on first philosophy* [R. Lafleur, Trans.]. New York: Bobbs-Merrill. (Originally published 1641)
- Dewey, J. (1939). *Intelligence in the modern world*. New York: Modern Library.
- Frye, A.M., and Levi, A.W. (1941). *Rational belief*. New York: Harcourt, Brace.
- Galanopoulos, A.G., and Bacon, E. (1969). *Atlantis: The truth behind the legend*. New York: Bobbs-Merrill.
- Gibson, J.J. (1966). *The senses considered as perceptual systems*. New York: Houghton Mifflin.
- Gregory, R. (1970). *The intelligent eye*. London: Weidenfeld & Nicolson.
- Hochberg, J. (1964). *Perception*. Englewood Cliffs, New Jersey: Prentice Hall.
- Hume, D. (2000). *A treatise of human nature*. Oxford: Oxford University Press. (Originally published 1739–1740)
- Koestler, A. (1967). *The act of creation*. New York: Dell. (Originally published 1964)
- Köhler, W. (1956). *The mentality of apes*. New York: Vintage. (Originally published 1927)
- Kuhn, T. (1970). *The structure of scientific revolutions*. New York: New American Library.
- Leibniz, G. (1973). Metaphysical consequences of the principle of reason. In G.H.R. Parkinson (Ed.), *Leibniz: Philosophical writings* (pp. 172–178). London: J.M. Dent & Sons. (Originally written 1712)
- Mayer, R.E. (1992). *Thinking, problem solving, cognition*. New York: W.H. Freeman.
- Poincaré, H. (1952). *Science and hypothesis*. New York: Dover. (Originally published 1905)