The Cosmology of Cognitive Science from Hesiod, Socrates, and Plato to Wittgenstein

[The Greek Masters from Thales to Socrates] invented … the archetypes of philosophic thought. All posterity has not made an essential contribution to them since.

Nietzsche, *Philosophy in the Tragic Age of the Greeks* (31)

Cognitive science [hereafter CS], roughly, provide an account of human intelligence and behavior by reference to physical “mechanisms” at the neural center, the heir to the 18th century Enlightenment project to realize the 18th century enlightenment vision of *L’homme Machine* (McDonough, 1999a, 125-26), is one of the dominant philosophical projects of our time. P.S. Churchland, 1988, 461-462) claims that the only alternative to this mechanistic view is “magic”. Similarly, McGinn (1989, 353) states that there “just has to be” some mechanistic explanation of the way brains “subserve” minds. To be sure, there have been dissidents to this attempt like Heidegger and Wittgenstein, but they are, admittedly, somewhat obscure. Kuhn (1970, 77-91) teaches that establishment science is extremely resistant to the development of alternative paradigms, even invoking purely “ad hoc” ways of saving the favored paradigms. Is it even possible to develop a genuine alternative to this near universally accepted materialistic and mechanistic CS paradigm? What would an attempt to do so look like? The present paper follows Heidegger’s suggestion that if one is to produce fundamental new ways of thinking, one must repeat the beginnings of philosophy, which means its beginnings in ancient Greece, in order to “reawaken” the possibilities there that have been lost to subsequent ages (Safranski, 1999, 246, 278). The main text for the paper is para. 608 of Wittgenstein’s *Zettel* (hereafter Z608). This passage from Wittgenstein’s “later philosophy” (hereafter WLP) has generally been claimed to say that language and thought may arise from physical chaos at the neural center. In order to show that this is wrong, and that Z608 is proposing a radically new paradigm for thinking about language and mind, the paper argues that the language in Z608 is not the language of modern science, but, rather, is the literary-religious-cosmological language of the emergence of a cosmos from chaos with which the Western intellectual tradition began in Hesiod and Plato. Call this the “Religious-Cosmological Interpretation” of Z608 or RCI! The paper distinguishes Hesiod’s and Plato’s models of the sense in which the cosmos arises from chaos. This includes a discussion of Plato’s microcosmic doctrine because that is what licenses the application of cosmological models to human beings in order to produce the framework for CS. The paper argues that modern mechanistic CS is an application of a stunted interpretation of Plato’s cosmology to the human microcosm, but that Z608 makes a novel application of these ancient cosmological models to human beings in order to propose a new paradigm for thinking about language and
thought. This new paradigm has some affinities with Plato’s cosmology, but also, in a different respect, with Hesiod’s cosmology and with certain of Socrates’ views.

§ I describes the core program of CS. § II shows why the orthodox interpretations of Z608 cannot be correct. § III briefly sketches the “religious-cosmological” interpretation of Z608. § IV explains Plato’s relevant cosmological and microcosmic doctrines. § V discusses the cosmological model that provides the foundation for CS and shows how the ancient microcosmic doctrine reappears in one highly influential version of CS. § VI shows how Hesiod’s, Plato’s and Socrates’ views enable one better to appreciate the new paradigm Wittgenstein proposes in Z608. § VII explains why Wittgenstein’s real program in Z608 has proved so elusive to modern philosophers.

I.) The Basic Program of Cognitive Science

The central nervous system is composed of the brain and spinal cord and can be thought of as the control center for interpreting sensory input and directing our thoughts and actions.

There are three main paradigms in CS, the “representational theory of mind”, defended by Fodor (1979), (1987), and (2010), connectionism, defended by P.S. Churchland (1989) and P.M. Churchland (1989) and (1995), and dynamic systems theory, defended by Port and Van Gelder (1995). Despite the differences between these paradigms, all agree that mind and intelligence are realized in the brain. Fodor (1979, 52) holds that information is available to an organism when it is “encoded” in causally effective neural states. P.S. Churchland (1989, 239) does not ask how Susan visually recognizes shapes but how her brain does so. Port and Van Gelder (1995, 450) claim that “the [self-organizing] brain may achieve autonomous control [of perception and behavior] in a rapidly changing environment”. All agree with the basic tenant of CS that the brain is the central control system of human language, thought and behavior.

Green (1981, 106) points out that “central state materialism” involves two sub-theses, first, the “identity theory”, the view that mental states are identical with brain states, and, second, the view that the brain works like a machine that obeys the principles of physics and chemistry. The present paper is not concerned with the “identity thesis,” but only with the more moderate mechanistic thesis of central state materialism because, as Putnam (1981, 81) points out, the identity thesis is considered controversial, but “everyone knows that there is at least a correlation” between mental states and states of the brain. The machine model is ubiquitous in CS. Fodor (1979, 68) states that “I shall continue to rely heavily on the machine analogy”. P.S. Churchland states that “If you root yourself in the ground [i.e., plants], you can afford to be stupid. But if you move [i.e., animals], you must have mechanisms for moving.” Port and Van Gelder (1995, 559ff) purport to describe the exotic cognitive “mechanisms” posited by “mathematical dynamical systems” theory. Despite various differences, all versions of CS agree that human
intelligence and behavior are produced by this physical machine at the neural center (Greenfield, 1995, 24-56). Is there anything more obvious than that some version of this of nearly universally accepted materialistic mechanistic paradigm is correct?

II.) The Orthodox Interpretation of Zettel (608)

No supposition seems to me more natural than that there is no process in the brain correlated with associating or with thinking; so that it would be impossible to read off thought processes from brain processes. I mean this: if I talk or write, there is, I assume, a system of impulses going out from my brain and correlated with my spoken or written thoughts. But why should the system continue further in the direction of the center? Why should this order not proceed, so to speak, out of chaos? …

Wittgenstein, Zettel (608).

Z608 is a striking passage, especially for the anti-metaphysical Wittgenstein (PI, 116). For it has been interpreted to say that language and thought may arise from chaos in the brain. Call this the “neurological interpretation” of Z608 or NI! McGinn (1984, 12–13, 112–114) thinks Z608 states that normal human heads might turn out to be filled with sawdust. Scheer (1991) believes it suggests that causal indeterminism may occur in the brain. Davies (1991), Mills (1993) and Sutton (2014) separately claim it anticipates recent “connectionist” models of neural processing. Ben-Yami (2005) thinks it holds that it is possible that the brains of normal people might be in physical chaos. Hark (1995) thinks it suggests an alternative to Köhler’s theory of electric brain-fields. But all agree that the “center” and “chaos” mentioned in Z608 are the neural center and neural chaos. Thus, all hold that Z608 suggests that language may arise out of physical chaos in the brain. Since the case against NI has been made in detail elsewhere (McDonough (1989), (1991a), (2004), (2014a),(2017a),and (2018), only the key points are stated here.

The first obvious problem with NI is that Z608 explicitly denies that the brain is in chaos. The second sentence in Z608 affirms that “there is, I assume, a system[LW’s emphasis] of impulses going out from my brain and correlated with my spoken or written thoughts.” Indeed, NI has to be wrong here because it is a basic tenant in WLP is that “what is hidden is of no interest to us” and that, therefore, “we must not advance any kind of theory” (PI, 109, 435), which includes theories about sawdust in the head, connectionist processing, quantum indeterminacy in the brain, and Köhler’s theory of electric brain fields. Indeed, at Z447, Wittgenstein states that his aim is to replace “wild conjectures and explanations by quiet weighing of linguistic facts.” None of these extravagant NI theories resembles “a quiet weighing of linguistic facts.” The idea that in Z608 WLP has suddenly begun theorizing about hidden neural processes simply does not make sense.

The second obvious problem is that Z608 does not state that language and thought may arise out of chaos. It states that they may, “sozusagen [so to speak]” do so. WLP does not state theories but, rather, makes philosophically illuminating
comparisons (PI, 130-131; RFM, V.12; CV, 19). Z608 compares the production of language with the emergence of order from chaos, but it does not assert any theory that language and thought might literally arise from chaos. There can be no emergentist theory, like R.W. Sellars’ view that mind literally emerges from matter over the course of the evolutionary process (McDonough, II, §’s 3&4), in Z608.

The third obvious problem is that Z608 does not say that the system of brain impulses continues towards the neural center. That is NI’s interpretation. It is not stated in the text. If one reads Z608 closely, it is clear that the neural impulses are moving from the brain towards the center, which means that the center is in the external world with “my spoken or written thoughts”. WLP explicitly identifies this center. Anscombe translates PI (108) to say that Wittgenstein’s investigations focus on “the fixed point [Angelpunkt] of our real need,” but the literal translation of “Angelpunkt” is “center-point” (Traupman, 1991, 17). WLP sees “ordinary life” as the true “center” around which language, sozusagen, turns. WLP’s notion of the center of a language is also explicitly identified at RFM (III, 15 and V.12). What could be clearer than that WLP holds that language is centered in ordinary life rather than the brain? “Now ask yourself: what do you know about these things [in the brain]” (PI, 158).

The single most significant scientific and philosophical advance in the past several thousand years is, arguably, the “Copernican Revolution” in astronomy, in which Copernicus replaces the entrenched Ptolemaic view that the earth is the center of the universe with his new view that the true center is the sun. What was thought to be the center, the earth, is reassigned to the periphery, and what was thought to be peripheral, the sun, is identified as the true center. Z608 proposes its own “Copernican Revolution”, not in astronomy, but in our views of language and thought (McDonough, 1989, 18-21; Dilman, 2002,18-37). Whereas CS holds that language and thought “revolve,” sozusagen, around the central brain, Z608 suggests that they “revolve,” sozusagen, around human activities in “forms of life” (PI, pp. 174, 226). The brain, seen by CS as the center, is seen by Z608 as peripheral in the sense that though one needs a functioning brain if one is to think or speak intelligibly, WLP sees the brain merely as an instrument employed by the intelligent organism (McDonough, 1992, §V). Z608 does not deny that one needs a functioning brain to think. It only denies that our brain is the autonomous control center of human intelligence. Rather, Z608 suggests that the human organism is centered on their public world of human activities. It is, roughly, Susan, situated in her world, not the brain inside her cranium, who decides what she thinks or means.

Wittgenstein’s “Copernican” reversal on the identity of the true center also clarifies the nature of the “chaos” referenced in Z608. Since WLP identifies the center as human forms of life, and since the chaos is where the center is, Z608’s point is that language and thought emerge, sozusagen, from the chaos of activities in those “forms of life.” Indeed, WLP employs this chaos-imagery elsewhere. CV (65) suggests that philosophers must learn to make a home in “primeval chaos”—but there is nothing “primeval” about the brain and one cannot make a “home” in it. WLP also refers to this chaos in human life at Z567 when Wittgenstein states
that “what determines our judgment” about what something means is “the background” consisting of “the ganzeGewimmel [great swarm] of human actions.” Roughly, expression E means M if and only if E is part of a pattern that arises against the chaotic background “swarm” of human actions. That is why CV (65) states that philosophizing requires a descent into the chaotic swarm of activities in human forms of life. This “descent” is required for the philosopher because on WLP’s view, it is in these activities, not in the brain, that linguistic meaning resides. Thus, Z608 does not say that language and thought may arise from chaos at the neural center. Rather, it suggests that language and thought arise, sozusagen, from the “chaos” of human activities in the “Angelpunkt of our real need” (ordinary life). If Z608 had been written by a cognitive scientist, it might make sense that its references to the center and to chaos are properly understood as referring to the neural center and neural chaos, but this makes no sense for a philosopher among whose primary purposes to criticize CS. See Goldberg (1982) and (1999), Malcolm (1977), (1984) and (1986), McDonough (1989), (1991)and(1999b), Proudfoot (1997), and Hacker and Bennett (2003)!

III.) The Religious-Cosmological Interpretation of Zettel (608)

[Wittgenstein told] his close friend Drury: … “I am not a religious man but I cannot help seeing every problem from a religious point of view.”

Malcolm, Wittgenstein: From a Religious Point of View? (1)

One of the keys to understanding Z608 is the recognition that it is not speaking in the language of contemporary CS, but, rather, in the literary religious-cosmological language of the creation of a cosmos from chaos with which the Western intellectual tradition began in Hesiod’s Theogony and subsequently carried down through the entire Western cultural tradition. The ancient cosmological notions of the emergence of order from chaos at the center is found in a plethora of literary, religious, scientific and philosophical thinkers throughout the Western tradition. McDonough (2014a) and (2014c) argues that the language and imagery in Z608, the emergence of some kind of meaning from chaos at the center, is found, respectively, in Augustine and Buber, in his (2014d) that it is found in Austrian economics, in his (2017a) that it is found in Gestalt psychology, in his (2017b) that it is implicit both in Borges and in Wittgenstein’s own “labyrinth” imagery, and in his (2018) that it is found in Haydn and Beethoven. Indeed, the key concepts in Z608, the emergence of a meaningful order from chaos at the center can be found in the cosmology in first few paragraphs of Milton’s Paradise Lost (McDonough, 2015b). In each of these areas, one finds various versions of the view that religious meaning (Augustine, Milton, and Buber), economic meaning or value (Austrian economics), perceptual meaning (Gestalt psychology), and musical meaning (Haydn and Beethoven) arises out of the relevant kind of chaos by virtue of movement towards the relevant center. In Augustine, Milton and Buber, the relevant center is, roughly, God or human communion with God, and the relevant chaos is the moral chaos of fallen human life. In Austrian economics the relevant center is the market activity that forms the
“center of gravity” of a free market economy and the chaos is the chaotic behavior of the market actors. In Gestalt psychology the relevant center is the stabilizing center of the visual field and the relevant chaos is the chaos of perceptions out of which the Gestalt-image arises. In Haydn and Beethoven, the relevant center is the tonal center of the musical piece and the relevant chaos is the dissonant sounds out of which the musical harmony arises by virtue of the movement towards that tonal center. That is, each of these areas, religion, Austrian economics, Gestalt psychology, literature, music is treated as a microcosm of the cosmos in which the relevant cosmic structure, the emergence of order from chaos by virtue of movement towards that tonal center, is reproduced, with modifications due to the special requirements of the specific area. The religious cosmological interpretation (RCI) holds that the cosmological model developed in ancient Greece reappears in these and other areas of the Western intellectual and cultural traditions. Z608 simply applies the cosmological model implicit in all of these diverse areas to the cases of language and mind. RCI does not claim that Z608 is advancing cosmological theories about language and thought, but, rather, that Z608 compares the genesis of language and thought to the genesis of the cosmos in order to shed light on the natures of language and thought. There is no need to repeat the specific arguments here since the next section develops the argument in connection at one of its primal sources: Plato.

IV.) The Emergence of Order from Chaos at the Center in Plato’s Cosmology

Wherefore finding the whole visible sphere … moving in an irregular and disorderly fashion, out of disorder [God] brought order… [so that] the world came into being, a living creature… [God] made [the cosmos]…in every direction equidistant from the center [where] he put the soul, … [W]hen the creator had framed the soul according to his will, he formed within her the corporeal universe…and united them center to center. *Timaeus* (30a-c, 34a-b, 36d-e51)

Whitehead (1978, 39) suggests that “the European philosophical tradition … consists in a series of footnotes to Plato.” However, if the views in the previous section are correct, there is a sense in which the entire Western intellectual and cultural tradition, not just the philosophical tradition, consists in a series of footnotes to Plato. For the cosmological model articulated by Plato reappears repeatedly not just in philosophy, but in religion, literature, economics, psychology, music and other areas. The present section discusses Plato’s cosmology with a view to illuminating Wittgenstein’s real aims in Z608.

Plato’s *Timaeus* describes the cosmos as a living organism created by God, the “Demiurge,” who follows “eternal patterns” (which resemble Plato’s “Forms”) (Carone, 2005, 69ff). Unlike the Christian God, who creates *ex nihilo*, Plato’s *Demiurge*, like a craftsman, fashions the cosmos out of pre-existing materials (Sellars, 1967; Cornford, 2000, 37, 176). The creation consists in putting “intelligence in soul and soul in body” according to the eternal patterns, where the soul as the source of life and principle of self-motion (*Phaedo*, 105c, *Laws*, 896a, 966e).
Alluding to Hesiod’s view that the cosmos arises from chaos, Plato describes the pre-existing materials as “disordered,” but by this Plato does not mean the complete absence of order. Vlastos (1968, 398 &n2) points out that Plato thinks of mechanism as disorderly, [unless] it is teleologically ordered”. For Plato would see a thoroughly Newtonian world that is not guided by rational purpose as chaotic. Thus, Plato’s view that the cosmic organism arises out of chaos is consistent with its arising out of amechanical order. That is, Plato’s God, the Demiurge, is “a divine mechanic,” but not only that (Vlastos, 1975, 27). This extremely important if one is to understand the origins of the modern mechanistic CS paradigm in Plato’s cosmology.

The pre-existing chaotic materials take the form of a sphere, but it turns out that a sphere is also the most rational shape for the cosmic organism created out of that pre-existing chaos. The Demiurge imposes an order on that pre-existing chaotic visible sphere that makes it suitable to house the soul. One could not install a rational soul into a chair. A being must have a complex body and brain if it is to be capable of housing a soul. Thus, Plato does not deny that there are material or mechanical conditions for life and mind. In fact, he insists that there are such conditions. He only holds that these are subordinate to sovereign reason (McDonough, 1991b).

Plato’s view that the Demiurge synchronizes the pre-existing “visible sphere” and the spherical cosmic organism “center to center” means that it makes the mechanical and mental dimensions of the organism harmonize with each other. In doing so, Plato formulates an early version of the “correlation thesis” (Putnam, 1981, 81), the view that there must be a correlation between the mental and material states of the organism. Thus, the world-organism possesses an organic unity by virtue of its central order-imposing soul. Since there is nothing outside the cosmic organism, and since it is controlled by its own soul, it is autonomous in the visible (material) world. It depends on the eternal Forms, which are the ultimate causes of its being (Rep. 509b), but it does not depend on anything more basic within the visible world.

Unlike Pythagoras, who anticipated Copernicus’ view that the earth is a planet that moves around the central fire (Robinson, 1968, 76), Plato holds that the earth is at the center of the cosmos and that the heavens revolve around it. It is significant that the center of the sphere is more chaotic than the heavens at the cosmic periphery: Although Plato states that the earth is “as pure as the starry heavens,” he adds that “the earth” and “the regions in which we live are marred and corroded just as in the sea everything is corroded by the brine” (Phaedo, 109e-110a; Epin. 982a). For example, animals on earth move in a haphazard fashion, while the heavenly bodies move in near perfect circles. This is because the movements at the periphery of the cosmos in the heavens better reflect the perfectly rational Forms (Tim. 28a-b, 39d), the true causes of what is, while the earth, at the center of the cosmic sphere, far from these perfect motions in the heavens, is fraught with chaos and imperfection (Statesm, 273b-c; McDonough, [I], § 2.a).
Plato’s microcosmic doctrine is his view that mortal organisms are copies, although imperfect ones, of the cosmic organism (McDonough, I, §2.b, Carone, 2005, 30, 98, 161). Since an ordinary mortal organism, like a human being, is a *microcosm* of the whole cosmos, the structure of a mortal organism, like a human being, parallels that of the macrocosm. Just as the cosmos is a sphere that contains a “chaotic” mechanism at the imperfect earthly center, the human head is a sphere that contains a chaotic mechanism, the brain, at its imperfect center. However, although Plato acknowledges that the neural mechanism at the center of the head is important, he holds that the true final causes of human behavior are reflected at the periphery of the cosmos in the heavens, for the perfect mathematical motions in the heavens mirrors the perfect unchanging eternal Forms that are the true *ultimate* cause of all existence (Silverman, 2014, §13).

In summary, Plato’s *Timaeus* holds that the earth is at the center of a unique cosmic organism, in whose image human beings have been created, and whose nature and destiny has been ordained by eternal perfect unchanging causes. The night sky does not merely display physical bodies moving mindlessly in accord with blind mechanical laws (Épin. 982e-983a). Rather, it is the display of the radiant periphery of that perfect cosmic life, the image and source of our own better selves, from which we, mostly unknowingly, unless we achieve wisdom, draw our being and our destiny. Plato does not deny that the brain is involved in human behavior. What he denies is that it is the *control center* of human beings. The true “cause” of human behavior is not the machine in the head, but is outside the human being, reflected in the periphery of the cosmos, the heavens, whose more perfect motions better reflect the eternal Forms. Plato does not, therefore, subscribe to CS’s “central state materialism”. Indeed, the *Timaeus* makes clear that materialism cannot account for what takes place in the world (Cairns, 1969, xxv).

V.) The Cosmology of Cognitive Science

It follows … that not all languages one knows are languages one has learned, and that at least one of the languages one knows without learning is as powerful as any language one can ever learn. I admit that these conclusions may really seem scandalous. Fodor, *The Language of Thought* (82)

The basic framework of modern CS is implicit in Plato’s cosmology and his associated microcosmic doctrine, which is not to say that he endorses anything remotely likemodern materialist mechanistic CS. To be more precise, the core framework of CS is just one more of those many “footnotes to Plato” that is, allowing for some of the changes that have taken place between Plato’s ancient views and current times, present in Plato’s cosmology somewhat as the statue is present in the stone. The present section shows, first, how the place for the CS framework is prepared in Plato’s views, and second, how the ancient microcosmic doctrine appears in one highly influential modern version of CS, Fodor’s “language of thought” doctrine.
The core CS framework can be found in Plato’s cosmological views simply by excising certain key parts of those views. Recall, first, that Plato held that the cosmic organism is created by “uniting” the corporeal (material mechanical) sphere and the sphere of the cosmic organism “center to center” (a metaphorical way of saying that the material and the spiritual dimensions of the organism must work harmoniously). Recall also that he holds that the center of the cosmic organism, the earth, is chaotic, but this is consistent with the existence of some kind of mechanism there. Recall also that, given Plato’s microcosmic doctrine, and his view that the brain is the seat of human intelligence, Plato also agrees that there is a mechanism of some kind at the neural center that underlies human intelligence. But he also holds that the mechanical causes operative at the neural center are profoundly dependent on the more basic causes at the cosmic periphery (which latter better reflect Plato’s eternal final causes). Thus, if one eliminates Plato’s final causes at the cosmic periphery, which are, in the 20th and 21st centuries, largely seen as superstitions, one is left with the material mechanical causes at the cosmic center, and, via Plato’s microcosmic doctrine, on is left with the material mechanical causes at the neural center of the human microcosm. That is, CS’s framework of the controlling central state neural machine is derived from Plato’s cosmology by eliminating the final causes, which are the most fundamental causes for Plato, from both the cosmos and from the microcosm modelled on it. This truncated picture of the human organism, stripped of the most basic causes in Plato’s cosmology and microcosmic doctrine, provides the core model for CS.

It is also useful to show how Plato’s microcosmic doctrine appears in one of the seminal views in modern CS, Fodor’s (1979) “language of thought” doctrine (hereafter LOT). Since Plato’s microcosmic doctrine holds that mortal organisms are miniature copies of the cosmic organism, he holds that the human organism can think about the cosmos only if its brain imitates the motions of the heavens. It is true that, for Plato, the human brain, at the chaotic center, only imitates those heavenly motions imperfectly, but that explains why human beings do not think about the cosmos properly. Plato holds that humans can only think about the cosmos at all to the degree that the motions in their brains imitate the motions of the divine bodies in the heavens.

A similar view, which Fodor admits might seem scandalous, is implicit in Fodor’s LOT, the view that a human being can only learn a natural language if they already possess an innate language that is more powerful than any natural language that they can ever learn (see epigraph above). Fodor, in this respect, follows in the tradition of Plato’s view in the Meno (86a) that a person is born in innate possession of all the knowledge that they can ever learn.

The first thing that seems scandalous about Fodor’s view is that it is supposed to explain how a humble human child, like newborn Carlos, can learn a natural language like Spanish. The claim that Carlos can only learn Spanish because he already possesses an innate language, which Fodor (1987, 98, 107, 114-15) calls “Mentalese”, that can express anything about the world that can be expressed in Spanish, as well as anything that can be expressed by any natural language that Carlos can ever learn, seems, at minimum, somewhat unsatisfying. Carlos can
only learn a natural language like Spanish because he was born possessing an
innate mental language that he never learned that is more powerful that any natural
language that he could ever learn? That is supposed to be an explanation? One
would hope that the theory that is supposed to provide the explanation is less
controversial that the humble fact that is attempts to explain. In Fodor’s LOT, this
is reversed. For LOT requires one to endorse an extravagant theory about an
enormously powerful innate mental language to “explain” how a child learns to
say “Sí mamá!”

In fact, LOT implies the microcosmic doctrine. If one defines a “world” in
terms of the set of all the possible facts that might obtain in that world, then LOT
requires that a person is born with an innate representation any possible factin their
world that they could ever conceivably learn to describe. That is, LOT requires
that a human being is born with an innate “mentalese” representation of their
entire world in all of its multifarious possibilities. But that is nothing other than
the view that a newborn child innately possesses a microcosmic representation of
their entire learnable cosmos! It is, indeed, remarkable the way the ancient Greek
paradigms keep reappearing in entirely new, sometimes initially unrecognizable,
forms.

VI.) The Cosmological Reading of Zettel (608)

Philosophy … must remain cosmology, and cannot become theology.
Schopenhauer, The World as Will and as Representation, vol. II (611-612)

It is clear that Wittgenstein’s Tractatus was influenced by Schopenhauer
(Black, 1970, 308, 311, 367, 372, 377-78), but Schopenhauer’s influence remains
in WLP, though in a more diffuse way. For Schopenhauer’s view that all
philosophy remains cosmology offers a key to understanding Z608, with the
proviso that Z608 only compares the genesis of language and thought with the
genesis of the ancient cosmos. It does not offer any literal cosmological theories to
that effect. The first subsection argues that Plato’s cosmology bears a
certain similarity, up to a point, with the cosmological imagery in Z608. The
second briefly argues that, in another respect, the view in Z608 is, in a deep sense,
Hesiodic rather than Platonic. The third argues that there is also an important sense
in which Z608 (and WLP generally) is profoundly Socratic rather than Platonic.

1.) The Platonic Cosmology and Zettel (608)

Plato can never be considered a biologist, or a founding father of neuroscience; [but]
he writes about the intellectual powers of the head and brain in a number of his dialogues.
Wickens, A History of the Brain; From Stone Age Surgery to Modern Neuroscience (18)

It is shown in §V that the basic program in CS is derived from Plato’s
archetypal cosmological views by eliminating the final causes that Plato himself
holds are actually the most fundamental causes. This leaves the material
mechanical causes at the chaotic earthly center of the cosmos. Since the human
being is, on Plato’s microcosmic view, modelled on the cosmos, where the brain at
the center of the spherical head corresponds to the earth at the center of the
spherical cosmos, this means that the control center of the human being is a material mechanism at the center of the human head.

Although this view can, in this sense, be found in Plato’s cosmology, Platodoes not support CS: Indeed, his reasons for rejectingCS offers a key insight into the new paradigm Wittgenstein suggestsin Z608. Recall from § II that Z608 does not, as NI thinks it does, hold that language and thought may arise from chaos at the neural center. Rather, Z608 implicitly distinguishes between the neural center and the new center for language and thought identified in WLP, namely, the “Angelpunkt[center-point]of our real need” in “ordinary life.” Thus, the point in Z608 is that language and thought may arise from the very different kind of “chaos”, the chaos of human activities, that one finds in that earthly “center-point of our real need”. Since the “center-point of our real need” in ordinary life is external to the organism, this means that Z608, like Plato, holds that language and thought arise from what goes on at the periphery of the organism (even though Plato and Wittgenstein disagree greatly on the precise nature of that periphery). However, despite disagreements about the nature of the periphery, Plato’scosmology states the archetypalversion of the view that the primary determination of human matters is at the periphery of the material mechanical organism, not at its material mechanical neural center.

Just as Copernicus, in astronomy, reassigned the old center, the earth, to the periphery, and the old periphery, the sun, to the new center, Z608 reassigns the old center, the brain, to the periphery, and the old periphery, the sphere of human activities, to the new center. That is, Z608 can be profitably seen as making a broadly “Copernican” move by suggesting that the human organism is, so to speak, centered in the world of human activities—not, as CS holds, in its brain. But that is, roughly, what Heidegger (1962, §’s 12-13) means by saying that human being is “Being-in-the-world”. Thus, whereas Plato held that the true determinants of human life are found in the heavens, Wittgenstein and Heidegger, in theirdistinctively 20th century views, hold that human being is centered in the activities “in the world” towards which human beings comport themselves in ordinary life. Plato’s views are more “metaphysical,” while Wittgenstein’s and Heidegger’s are, so to speak, more “existential.” Despite these significant differences, Plato paves the way for Wittgenstein’s view in Z608 by producing a seminal ancient archetype that frees one from the idea that human intelligence is controlled by a material machine at the neural center. There is, however, one momentous difference between Plato’s view and Wittgenstein’s view in Z608.

2.) Hesiod’s Cosmology and Zettel (608)

How could anything originate out of its opposite? For example, truth out or error?

... The things of highest value cannot be derived from this transitory, seductive, deceptive, paltry world, this turmoil of delusion and lust. Rather from the lap of Being, the hidden god, the “thing-in-itself”—there must be their basis, ...

Nietzsche, Beyond Good and Evil (para. 1)
Although there are certain similarities between Plato’s and Wittgenstein’s views about the peripheral function of the brain in human intelligence, there is one truly momentous difference between their views. Whereas Plato holds that, at the most fundamental level, the order in human life must be produced by a prior order (the Demiurge and the Forms the Demiurge uses as patterns), Hesiod holds that even the gods emerge out of the chaos (Lamberton, 1993, 13). Thus, there is, for Hesiod, no prior Demiurge looking to the Forms to shape the primal chaos into acosmos. Z608, in this respect, revives Hesiod’s paradigm that has been embraced only by a tiny minority of thinkers in the Western tradition. For it is apparently very difficult to conceptualize the Hesiodic idea that order can arise in the world that is not produced by a prior order.

Bertrand Russell (1945, 143) remarks that, “as philosophy [Plato’s Timaeus] is unimportant” but, significantly, he goes onto admit that its “account of creation as bringing order out of chaos is to be taken quite seriously.” The present argument is not that Plato’s account of the creation of order out of chaos is true. The argument is that the Platonic view that order can only arise out of a prior order, and the Hesiodic view that order (and even the gods) can actually arise out of chaos, represent two fundamentally different archetypes for the human mind. In the West, the Platonic paradigm has dominated. It remains, therefore, for rare thinkers like Nietzsche and Wittgenstein to revive this Hesiodic view that the order in the world arises out of “chaos” without the involvement of any pre-existing ordering principles whatsoever. Indeed, it is part of the importance of Z608 that it is a distinctive modern reincarnation, applied to language and thought, of the ancient Hesiodic view that order and meaning can arise, not from some prior order, not from some eternal God or eternal patterns, not some prior neural machine, but from chaos.

3.) Bringing Philosophy (and Human Language) “down to earth”

[We] in a sense, bring the question “What is [linguistic] meaning?” down to earth.

Wittgenstein, The Blue and Brown Books (1)

Although Z608 agrees with Plato’s archetypal view that the brain is not the control center of the human organism, it does not agree with Plato’s view that the true determinants of human existence lie at the divine periphery of the cosmos. Rather, WLP brings philosophy, and, with it, language and thought, “down to earth”. But this is the explicit reincarnation of Socrates’ mission, as described by Cicero, to bring philosophy “down from the heavens to earth” (Taylor 1952, 138). Just as Socrates was only interested in what goes on in people’s lives, rather than at the heavenly periphery of the cosmos, WLP is similarly only interested in what people can do in their lives: “The form of expression we use [when we are doing philosophy] seems to have been designed for a god … For us [mere humans], of course, these forms of expression are like pontifical which me may put on, but cannot do much with …” (PI, 426). That is, whereas Plato and Wittgenstein agree that the brain is not the control center of the human organism, Plato’s view invokes metaphysical and cosmological views that Wittgenstein cannot accept.
Given Socrates’ relative lack of interest in cosmology (*Phaedo*, 97b-98c), in favor of a focused interest in human affairs on the imperfect “dim vast vale of tears”, the earth, Plato did not choose Socrates, but, rather, the 5th century Pythagorean, Timaeus, to present the cosmology in the *Timaeus*. Thus, despite an abstract similarity with Plato’s views at a certain level, WLP has a profoundly Socratic dimension. Indeed, there is, perhaps, no greater insight into the spirit of WLP than it is infused by the ancient Greek virtue, central to Socrates’ argument in the *Charmides*, of sophrosyne, which involves “accepting the bounds which excellence lays down for human nature,” refusing all “excess,” including, of course, metaphysical excess (Huntington and Cairns, 1969, 99). WLP, respecting the limits of human existence, does not purport to plumb the metaphysical depths of the cosmos. This is why Z608 only compares the genesis of language to the origin even when we do not mention the word “philosophy”.

Heidegger, *What is Philosophy?* (39)

In summary, there are three distinct ancient Greek archetypes at work in Z608, one Platonic, one Hesiodic, and one Socratic. First, although Plato’s cosmology provides the archetype of the sort of view that frees one from the dominance of the modern CS view that the neural machine at the center of the cranium controls the human organism, WLP cannot agree with Plato’s metaphysical views about the final causes at the cosmic periphery and, therefore, in the human microcosm as well. Rather, in keeping with the more modest views of 20th century philosophy, WLP holds that the human organism’s language and thought is centered in the periphery of the organism, i.e., the activities in Wittgenstein’s “human all too human” “forms of life” (*PI*, p. 226)—not the *Phaedo*’s (106d) sublime eternal unchanging Form of life. WLP holds that it is not in the synapses of the brain that thought and meaning are at “home,” but in the, *sozusagen*, of everyday human life (*PI*, 118). The second ancient Greek archetype needed to understand Z608 is Hesiod’s view that the order of the cosmos arises not out of a prior order but rather out of “chaos.” Although Z608 follows Plato is displacing the material mechanical brain from the center of human thought and language, Z608 belongs with that rare set of thinkers in the West, such as Nietzsche and Heidegger, who hold that order, like the orders of language and thought, do not need to be the mere repetition of some pre-existing order but actually arise out of “chaos.” In WLP’s case, however, the “chaos” is not cosmic chaos but the chaos of human activities in the “Angelpunkt of our real need”. The third Greek archetype needed to appreciate Z608 is Socrates’ mission to bring philosophy down from the cosmic periphery to...
earth that Wittgenstein explicitly endorses at *BB* (1). Thus, the reference in Z608 to continuing further in the direction of the center is not a reference to continuing further toward the center of the brain, but is a Socratic call for the philosophies of language and mind to continue further in the direction of the relevant center of human life, the “Angelpunkt of our real need” (ordinary life). The difference is only that whereas Socrates understood his task to bring every area of philosophy down to earth, WLP undertakes this task specifically with regard to the philosophies of language and thought.

The claim is not that there are no major differences between WLP and ancient Greek philosophy. The point is rather that given all the enormous changes in philosophy between the time of the ancient Greeks and the advent of WLP in the 20th century, changes required by the Renaissance, Descartes’ subjectivist revolution, the 18th century Enlightenment, the development of 20th century physics (Whitehead, 1978, 39), the ancient Greek philosophies and literature continue to provide the archetypes of philosophic thought.

VII.) Trapped in a Paradigm

The history of philosophy is the *lingua franca* which makes communication between philosopher’s, at least of different points of view, possible. Philosophy without the history of philosophy, if not empty or blind is, at least, dumb. Wilfrid Sellars, *Science and Metaphysics* (1)

It is worth asking how commentators have managed to read various kinds of extravagant neurophysiological theories into Z608 when it is quite clear that such interpretations cannot be the correct reading of a passage in the philosopher whose signature view is that one must not advance any kind of theory (*PI*, 109). How can it be that virtually all commentators have managed to attribute such utterly un-Wittgensteinian views to a passage in WLP?

The answer is that, in a fashion made clear by Kuhn (1970), scholars tend to presuppose their own paradigm when evaluating opposing paradigms—which guarantees that the alternative paradigm must either look absurd or like a version of their own paradigm. Thus, since virtually everybody (except a few outliers like Plato, Heidegger and Wittgenstein) thinks they know that the brain is the control center of the human organism, then, when Z608 asks why must “the system [of neural impulses] continue further in the direction of the center?”, it is assumed that surely it must be asking why the system of neural impulses must continue further in the direction of the neural center. What other center could it be? And when Z608 goes on to ask why the order of language and thought cannot “proceed, so to speak, out of chaos”? surely it must be asking why this order cannot proceed out of chaos in the brain! That is, when, following the Copernican analogy, Z608 attempts to replace the dominant CS paradigm’s view about the center of the linguistic microcosm, i.e., the neural center, with a new paradigm that identifies a new center, i.e., the “Angelpunkt of our real need” in “ordinary life”, the established CS
paradigm can only see this as just as absurd as the new Copernican paradigm seemed to the defenders of the Ptolemaic paradigm. Kuhn (1957, 43) describes the “reasons” the Ptolemaic paradigm gives to reject the newly Copernican paradigm,

The earth is not part of the heavens; it is the platform from which we view the heavens. And the platform shares few or no significant characteristics with the celestial bodies seen from it. The heavenly bodies seem bright points of light, the earth an immense nonluminous sphere of mud and rock. Little change is observed in the heavens: … In contrast, the earth is the home of birth and change and destruction…. It seems absurd to make the earth like the heavenly bodies whose most prominent characteristic is that immutable regularity not to be achieved on the corruptible earth.

That is, confronted with the new Copernican paradigm, defenders of the Ptolemaic paradigm simple rehearse their own paradigm, and feel justified in doing so, even though, to the Copernicans, they appear to be begging the question, because, for the defenders of the Ptolemaic paradigm, their own paradigm determines what makes sense and what does not. Similarly, since virtually everyone in the 20th-21st centuries thinks they know that the brain is the “platform” from which human beings view the world, it seems absurd to suggest that it is not the control center of the human organism. One can practically see that this is true (just as the Ptolemaic can see with their own eyes that the earth stands still while the heavens revolve around them). If one’s brain is injured, one cannot think or speak properly, whereas an injury to one’s hand or foot or stomach does not have the same devastating consequences for linguistic or cognitive ability. From CS’s perspective, to deny that the brain is the control center of the human being seems as nonsensical as it seemed to be nonsensical to the defender of the Ptolemaic paradigm to deny that the earth is the center of the cosmos—but, for all that, the earth is not the center of the universe.

It should now be clear that the orthodox view that Z608 suggests some extravagant theory about neural processes is the result of reading it in the light of the very paradigm it is attacking. The present paper attempts to liberate one from this error, and show that Z608 is proposing Wittgenstein’s own “Copernican Revolution” in the understanding of language and thought, by an examination of certain archetypes in ancient Greek philosophy and literature. For the framework for CS did not, so to speak, “fall from heaven.” It was developed by the philosophers of ancient Greece and passed, in ever new forms, down through the ages. The paper has attempted to show that the archetypes for the alternatives to the materialistic mechanistic CS paradigm, one version of which is developed by Wittgenstein in Z608, and WLP generally, were also developed in ancient Greek philosophy and literature.
Notes

1By Wittgenstein’s later philosophy (WLP) is here meant the Blue and Brown Books, Philosophical Investigations, Zettel, Remarks on the Foundations of Mathematics, On Certainty, and most of the remarks in Culture and Value—BB, PI, Z, RFM, OC, and CV respectively. References to BB and CV are by page number, to PI by paragraph number or page number as required, to Z and OC, by paragraph number, to RFM by section and paragraph number.

2Connectionism is, roughly, the view that information in the brain is not stored in discrete states, as in RTM, but that it is “distributed holistically” over the entire “neural net” (P.M. Churchland, 1995, 47-49; McDonough 1998, 374-380; Ho and Chan, 2006).

3Putnam is being sarcastic since he states in the same passage that this confidence is misplaced.

4McDonough (2017a) argues that Gestalt psychology (the way an image of a dog “emerges” from the spots on the paper) offers a good model of the kind of non-theoretical non-causal emergence Wittgenstein has in mind here.

5Although the Epinomis is generally believed to have been authored by one of Plato’s disciples, not by Plato himself, it is believed to represent the “spirit” of Plato’s views (Cooper, 1997, 1617). Cooper does go on to say that the Epinomis gives a “selective and distorting emphasis” to various elements of Plato’s view, such as its view that “wisdom is constituted solely by knowledge of astronomy”, the present paper only requires that astronomy is an element in Platonic wisdom, not that it is the “sole” repository of wisdom.

6Plato is generally highly critical of Hesiod. Protag. (316d) describes Hesiod as a Sophist in disguise. Rep. (377d) states that Hesiod’s stories are not appropriate for children. Plato has Phaedrus refer to Hesiod’s account of the god Chaos (Symp. 178b). See also Epin. (990a)! Since Plato holds that true philosophy searches always for the unchanging order underlying the apparent chaos, he sees Hesiod’s sort of view as inherently unphilosophical!

7Krell (1991, 91-92) discusses the Hesiodic dimension of Heidegger. See also McDonough (2014b, §5).

8The expression is from Shelley’s “Hymn to Intellectual Beauty.”

9The expression is from Nietzsche’s Human All Too Human.

10The expression is from Heidegger’s “The Question Concerning Technology.”

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