DARWIN AND FREUD AFTER DERRIDA: IS A POSTMODERN SOCIOBIOLOGY NOW POSSIBLE?

The Two Enmities

As professor Edward O. Wilson walked across the Harvard campus, people would follow him with bullhorns calling for his dismissal. Protestors handed out leaflets during his lectures. In 1978, as he was about to begin his speech at the meeting of the American Association for the Advancement of Science, someone ran up and poured a pitcher of water over his head, shouting “Racist Wilson you can’t hide, we charge you with genocide.” So who is Edward O. Wilson and what sin did he commit to invite such vilification and hatred? Wilson is an eighty-year old biologist who studied ants for most of his academic career. Outside of the field of myrmecology, he was relatively unknown until 1975 when he published a book entitled *Sociobiology: The New Synthesis*. He followed this with a further volume entitled *Consilience: The Unity of Knowledge*. Ever since an academic battle has been raging between sociobiology and evolutionary psychology, and the humanities and social sciences, and in particular postmodern critical social theory and feminism.

The psychologist Irwin Silverman, in a guest editorial entitled “Confessions of a Closet Sociobiologist: Personal Perspectives on the Darwinian Movement in Psychology,” explains that because of the hostility and emotional reactions that the term ‘sociobiology’ has engendered, it has been replaced with a new title: evolutionary psychology. Silverman asks the question: “Why did we have to hide behind a new label to survive? Who are our enemies and why?” The evolutionary psychologist Steven Pinker, the author of *The Language Instinct*, and *The Blank Slate: The Modern Denial of Human Nature* writes: “The politics of gender is a major reason that the application of evolution, genetics, and neuroscience to the human mind is bitterly resisted in modern intellectual life.”

Robert Wright, author of several books on evolutionary psychology, wrote an article in the *New Republic* in which he targeted radical feminism as the enemy of evolutionary psychology. In response, at an international conference on gender subjectivity, Sophia Elliott Connell commenced her paper, “Feminism and Evolutionary Psychology” with the comment: “If feminists — of all stripes — want to know their enemy, it is now available for inspection (Wright’s ‘Feminists Meet Mr. Darwin’). The enemy in question is evolutionary psychology.” Barbara Ehrenreich and Janet McIntosh, in a frequently cited article in *Nation*, entitled “The New Creationism: Biology Under Attack”, refer to postmodern critical social theory as “a new secular creationism”. David Horowitz asserts that American universities are teaching “a form of secular creationism as contrary to the findings of modern science as the Biblical claim that God made the world in seven days.” “The name of this theory,” he writes, “is ‘social constructionism,’ and its churches are Women’s Studies departments situated in universities across the United States.”

Darwinian evolution is no longer a theory but a scientifically established fact that no intelligent educated person in the twentieth century in good faith can deny. If so then it is obvious that there is a relationship between our evolutionary history and the human condition. Why should such an assertion trigger the academic battle that has been raging
ever since between sociobiology and evolutionary psychology on the one hand, and the humanities and social sciences, and in particular postmodern critical social theory and feminism, on the other? It seems obvious that it makes sense for evolutionary biology to explore the journey from our common ancestor with the two pan species to *Homo sapiens*, and for the social sciences and humanities to reach back deeper into the prehistoric past.

While animal–human comparisons are essential; they can also be dangerous in that they suggest that the present state of the human condition can be justified in terms of genetic determinism. Similarities between chimpanzee and human violence are obvious. Wrangham and Peterson in their study *Demonic Males*, compare the murderous raiding parties of chimpanzees, witnessed and documented by Jane Goodall, with the patterns of warfare among the Yanomami of Brazil. In The *Beast Within: Why Men Are Violent*, The criminologist Neil Boyd traces the origin of the violence of human males to our genetic inheritance from our common ancestor with the chimpanzee.

Such comparisons are simplistic at best and totally misleading at worst. Even among violent chimpanzees conflict between males seldom leads to the death of a defeated male so long as the male retreats. The frenzied murderous attack on another band witnessed by Jane Goodall occurred only occasionally with long intervals of time between. In regard to humans we could list a long litany of horrible violence ranging from the agonizing deaths that North American Indian tribes imposed on captured prisoners including women and children, ethnic cleansing, rape, the honor killing of daughters by members of their own family, torture, the serial killing, and the list goes on. There seems to be no evolutionary restraints on the capacity of humans for violence and sexual perversion. Male chimpanzees are not proto-Nazis and the perpetrators of the holocaust, of the killing fields of Cambodia, and of the ethnic cleansing of Rwanda, are misconceived as killer apes.

Barbara Smuts presents us with her own eyewitness accounts of how male chimpanzees attack females before they come into full estrus in order to intimidate them so that they can maintain their own mating exclusivity. The use of violence by males to coerce females into undesired copulation is equated with rape in Thornill and Craig’s *Rape: A Natural History of Biological Bases of Sexual Coercion*. Given the prevalence of rape throughout most of human history this form of sociobiology implicitly suggests that men rape because it is in their genes. Herbert Spencer’s distortion of Darwin’s principle, “the reproduction of the fittest” as “the survival of the fittest,” became a justification for colonialism, eugenics, and Nazism. Male domination of females has been legitimized and rationalized by religious, political, legal, philosophical, and cultural institutions that collectively we call patriarchy. Sociobiology could now be used to suggest that it is natural.

The Cartesian Divide

In response to the understandable reaction of the humanities and social sciences to the deterministic crude analogies between male apes and human males, further fueled by the unfortunate history of eugenics in the first half of the twentieth century, those seeking Wilson’s consilience adopted a new name, “evolutionary psychology” and a new focus, the evolution of language. In the second half of the twentieth century Noam Chomsky
revolutionized linguistics by proving that there is a common generative and recursive structure underlying the grammars of various languages. Languages are constituted by a set of grammatical categories and phrase structures, with a set of simple recursive rules by which every grammatical construction in any language whatsoever can be explained. Chomsky categorically denies that language evolved as an adaptation but rather argues that it was a byproduct of the evolution of a general capacity to think recursively, but offers no hypothesis as to the evolutionary history of this mental mechanism.

Chomsky identifies his theory of linguistics, entailing certain universals of the structure of language, as falling within the category of “Cartesian Linguistics.” Cartesian linguistics is constructed on the foundation of a conception of the subject as standing independently outside of language. Chomsky argues that, while Descartes made little reference to language in his writings, certain presuppositions about the nature of language played a significant role in the development of his thought. “The central doctrine of Cartesian linguistics,” according to Chomsky, “is that the general features of grammatical structure are common to all languages and reflect certain properties of the mind.”

“Language acquisition”, according to Chomsky, “is a matter of growth and maturation, appropriate external conditions, of relatively fixed mental capacities or innate or latent mental structures.” He concludes: “In summary, one fundamental contribution of what we have been calling ‘Cartesian linguistics’ is the observation that human language, in its normal use, is free from the control of independently identifiable external stimuli or internal states and is not restricted to any practical communicative function, in contrast, for example, to the pseudo language of animals. It is thus free to serve as an instrument of free thought and self-expression.” Thus Cartesian linguistics presupposes the Cartesian subject possessing human reason as a universal instrument that can serve for all contingencies.

Much of the literature on the evolution of language has been based on the assumption that, as language gives our species a significant survival advantage over others, it must be the product of natural selection, selecting ever-superior abilities to communicate. One of the more convincing forms that this story has taken is to be found in the paper, “Natural Language and Natural Selection”, published in 1990 by Steven Pinker and Paul Bloom, and followed in more detail by Pinker’s book The Language Instinct. Pinker argues that a language instinct unique to modern humans poses no more of a paradox than a trunk unique to modern elephants. He asserts that there must have been genetic variation among individuals in their grammatical competence. In Chomsky’s linguistics meaning is conceived as “the act of a transcendental ego, cut off from its body, its unconscious, and also its history.” Despite the differences between Chomsky, Pinker, and others as to its evolutionary history based as they are on Chomsky’s linguistics, their theories presuppose Cartesian subjectivity.

The texts that gave birth to postmodern critical social theory are varied and complex, reaching from the German pentagon, Hegel, Marx, Freud, Nietzsche, and Heidegger, to the vast body of literature emanating from France. The perspectives from which this discourse emerged are diverse and contradictory moving from existentialism, phenomenology, structuralism, poststructuralism ending with deconstruction.
Nevertheless postmodern critical social theory rests on a well-defined central foundation: the deconstruction of the Cartesian subject and of Cartesian subjectivity, and herein lies the basis of the conflict.

Postmodern critical social theory is in itself a grand convergence of Freud’s psychoanalysis, the semiotics of Ferdinand de Saussure and Charles Sanders Peirce, and Jacques Derrida’s Deconstruction. Jacques Lacan unified psychoanalysis and semiotics. Derrida developed a convergence between literature and philosophical tradition that reaches through Heidegger back to Nietzsche. Julia Kristeva, who was both a psychoanalyst and semiotician, produced a further alliance with feminism. Surely postmodern critical social theory, a consilience par excellence, could accommodate a further convergence with evolutionary biology, providing common frame of reference can be found.

There is no conflict between the essential theoretical underpinnings of postmodern critical social theory and those of evolutionary biology. The issues presently separating evolutionary psychology and the humanities and social sciences have nothing to do with Darwin or evolutionary biology as such. They have everything to do with divisions within epistemology, cognitive science, linguistics, and theories as to the nature of mind. The theoretical foundation of postmodern critical social theory is the deconstruction of Cartesian subjectivity. Postmodern critical social theory opposes evolutionary psychology because it presupposes the Cartesian subject in its search for the origin of language. The source of the enmity between postmodern critical social theory and evolutionary biology is the Cartesian divide.

**Slaying the Homunculus**

The Cartesian subject is the self conceived as a simple, primal, irreducible *I* that is the foundation of being, as in “I am”. The Cartesian subject is the creator of discourse and therefore is independent of its content. It stands independently outside of it, irrespective of the existence of others, and therefore is not a social construction. The “I” of the Cartesian subject does not require a “You.” The Cartesian subject seems to be indistinguishable from the idea of the soul or spirit that inhabits the body, and since it is separate from the body, can live on after its demise. The Cartesian subject is unified as contrasted with the Freudian subject, split between the conscious and the unconscious. The Cartesian subject is the homunculus, the little persons in our minds who inhabits our bodies.

The Cartesian subject is autonomous as the creator of self-reference rather than being the product of self-reference. It is the “I” that knows the object “me.” The Cartesian subject is transcendent, standing outside of language as its creator rather than being a product of language. The Cartesian subject brings language into being rather than itself coming into being within the house of language. The Cartesian subject is the creator of signs rather than being an emergence from signification. The Cartesian subject is the thinker of thoughts rather than being the product of thinking.

The first direct attack on Cartesian subjectivity came from Friedrich Nietzsche, who stated in *The Genealogy of Morals*:

> “Henceforth… let us be on guard against the dangerous old conceptual fiction that posited a ‘pure, will-less, painless, timeless knowing subject’; let us guard against the snares of such contradictory concepts as…”
‘knowledge in itself’. … There is only a perspective seeing, only a perspective ‘knowing’; and the more affects we allow to speak about one thing, the more eyes, different eyes, we can use to observe one thing, the more complete will our ‘concept’ of this thing, our ‘objectivity,’ be.”

The second challenge came from Freud. The Freudian subject is split between the conscious and the Freudian unconscious, and is decentered within the symbolic order within which it is born and by which it is constituted.

The third challenge to the Cartesian subject came from semiotics, the science of signs. The father of semiotics in Europe was the linguist, Ferdinand de Saussure. As explained by Jonathan Culler: “Saussure puts the subject right at the center of his analytical project” because linguistic units are always identified with reference to the speaking subject. “However, once the subject is in place, firmly established at the center of the analytical domain, the whole enterprise of the human sciences becomes one of dismantling the subject, of explaining meanings in terms of systems of convention which escape the subject’s conscious grasp... The subject is broken down into its constituents, which turn out to be interpersonal systems of convention.”

Charles Saunders Peirce was the founder of semiotics in North America. Peirce’s semiotics entail fundamental assertions about the human subject which give the subject meaning in terms of the position of the “I” in semiotic dialogue rather than in a “Cartesian idea of the mind.” Peirce offers his “account of mind-as-semiosis” as the alternative to any pre-existent Cartesian subject standing outside of and independent of the system of signs. Peirce declares:

> It is that the word or sign which man uses is the man himself. For, as the fact that every thought is a sign, taken in conjunction with the fact that life is a train of thought, proves that man is a sign; so, that every thought is an external sign, proves that man is an external sign. That is to say, the man and the external sign are identical, in the same sense in which the words homo and man are identical. Thus my language is the sum total of myself; for the man is the thought.

When Charles Saunders Peirce proclaimed that man is a sign, and Jacques Lacan declared that man is a signifier, they prevent the reduction of the self to merely the physical body and, on the other hand, they refute the Cartesian subject by placing it within the symbolic universe, including language, rather than external to it.

The fourth assault was the deconstruction of Cartesian subjectivity by Jacques Derrida. Derrida challenges the binary opposition that permeates the way that Cartesian subjectivity postulates a “reality” and then organizes it in terms of distinctions such as true and false, mind and body, positive and negative, life and death, right and wrong, by demonstrating the indeterminacy involved in such distinctions. There is no transcendental signification that can establish binary hierarchy. Therefore there can be no truly privileged side of a binary opposition. Hierarchy is established relationally within a system of signs serving particular interests and desires. Signification is endlessly commutable. According to Derrida: “Now from the moment that one considers the totality of determined signs, spoken, and a fortiori written, as unmotivated institutions, one must exclude any relationship of natural subordination, any natural hierarchy among signifiers or orders of signifiers.” The reason is that: “No ground of non-signification
Derrida proposes a number of different strategies for disrupting the binary structures of Cartesian metaphysical thinking. One method he uses is to demonstrate the indeterminacy of binary opposition by introducing examples of where the “either-or” structure of binary signification fails. Between masculine and feminine there is androgyny. Between the human and the machine there is the android. Between the living and the dead there is the zombie. Between up and down there is the middle. Between the past and the future there is the now of the present. Between true and false there is the maybe. Between the positive and the negative there is the neutral.

Another method Derrida uses for disrupting binary opposition is to reverse the hierarchy of the privileged status of the binary poles, to privilege body over mind, matter over spirit, female over male, man over God, and the Other over the Subject. Thus metaphysical hierarchy can be deconstructed through hierarchical reversal. He uses hierarchical reversal to introduce the idea of the undecidability, to displace the metaphysical foundations of the privileged terms in the critical binary oppositions we use to structure our world.

Derrida has had a substantial effect on postmodern feminism by providing strategies for deconstructing gender and challenging both biological and cultural determinism regarding sexual identity. The editors of Derrida and Feminism: Recasting the Question of Women, state in their introduction that Derrida, “following certain clues in Nietzsche,” provided strategies for deconstructing the concept of “woman” and “normal” female sexuality. Since gender hierarchy is determined by an ordering of signifiers, and the relationship between the signifier and the signified is internal to the process of signification, gender hierarchy cannot be justified in terms of an appeal to a transcendental or metaphysical reality, whether in the form of nature or God. Gender hierarchy and sexual identity are products of motivated semiotic systems and as such are indeterminate from the perspective of any metaphysical binary opposition.

**Deconstructing the Cartesian Subject**

Derrida refers to (a) perception, (b) symbolic representation in terms of a theory of language as writing, and (c) the metaphysics of presence where (a) is brought into convergence with the matrix of interrelated meanings and bifurcations of (b) to form the logocentric metaphysical realities of (c). Essential to deconstruction is the fact that the convergence of (a) and (b) at level (c) is indeterminate because there is no transcendental signifier to bring finality and certainty. There is only the infinite play of signification. There can, therefore be no final objective metaphysical truth or an objective reality independent of knowing.

The Cartesian subject stands outside the symbolic universe. From the perspective of Cartesian subjectivity there is (a) a material world independent of knowing. There is (b) language that stands in a one to one relationship with (a). Then there is (c) the knowing and speaking subject that is independent of both. The subject (c) creates language (b) to represent existence (a). There are final truths and there is an objective reality independent of the knower.

In contrast, from the perspective of postmodern critical social theory, there is:

(a) The phenomenological matrix of internal and external perception that we share
with animals. It is the product of sensory systems such as the visual, the auditory, and the tactile that to a large degree is genetically determined.

(b) There is an interrelated semiotic matrix consisting of language and signs into which we are born.

(c) Their relatedness in thought as: (a) \(\rightarrow\) (b) \(\rightarrow\) (c) \(\leftarrow\) (a) whereby at the level of metacognition (c), phenomenological perception (a) is brought into a convergence with its representations (b), as the thought (b) \(\rightarrow\) (c) \(\leftarrow\) (a).

The convergence of perception with writing as presence is indeterminate because the subject is within and apart of the system of symbolic reference. At this point (a) is known only through (b).

Words do not simply stand for or represent the qualia of perception and concepts. Signifiers and the signified converge in presence. Language is transparent in that we think through it rather than with it. As stated by James Phillips; “The perfection of language lies in its capacity to pass unnoticed. But therein lies the virtue of language: it is language that propels us toward the things it signifies. In the way it works, language hides itself from us.” We have (a) the perception of the white, cold form of precipitation. We have (b) the word “snow” that we use to refer to it, that gets its meaning in terms of a matrix of related concepts such as water, color, and temperature. When we think of “white snow” we generally do not take cognizance of the fact that the words are not the thing. It is next to impossible to think of the whiteness of snow outside of language since (a) and (b) converge as (a) \(\rightarrow\) (b) \(\rightarrow\) (c) \(\leftarrow\) (a). Perception is mediated through language as presence. The point at which the phenomenological experienced perceptual world and language converge is at the level of meta-cognition.

Derrida finds support for his denial of a natural foundation for binary hierarchy in the semiotics of Peirce. He states, “Peirce goes very far in the direction that I have called the de-construction of the transcendental signified…. Now Peirce considers the indefiniteness of reference as a criterion that allows us to recognize that we are indeed dealing with a system of signs. What broaches the movement of signification is what makes its interruption impossible. The thing itself is a sign…. There is thus no phenomenality reducing the sign or representer so that the thing signified may be allowed to glow finally in the luminosity of its presence.” The so-called “thing itself” is a thought, and a thought is a sign.

Peirce declared, “That ideas can nowise be connected without continuity is sufficiently evident to one who reflects upon the matter.” The Interpretant of a sign functions as the Representamen of another sign since the Interpretant of each thought becomes the Representamen of a further sign. This process is generally referred to as Semiosis. Each thought interprets the thought that precedes it and becomes the Representamen of a thought to follow. Thus Peirce was able to define a sign as a recursive process. “Sign: Anything which determines something else (its interpretant) to refer to an object to which itself refers (its object) in the same way, the interpretant becoming in turn a sign, and so on ad infinitum.” Umberto Eco called the process whereby the Interpretant of a sign became the Representamen of another sign, so on ad infinitum, “infinite semantic recursivity” and “unlimited semiosis.”

The Cartesian subject is an illusion that is the product of our capacity for self-reference that produces the bifurcation of the knowing self and the self that is known.
Non-Cartesian subjectivity is constituted by the structure of self-reference such as Peirce referred to as “a sign of itself.” According to Peirce, a sign generally represented something else called its Object. The Object of a sign of itself is something within the sign and thus the object was part of the sign. In this sense the sign was self-representative. Thus a sign of itself contained its own explanation.33

The system of knowing is to some degree self-referential because subjectivity is internal to it. The knower is a part of the known. There is (a) the level of the phenomenological perceptual self, (b) the semiotic matrix in terms of similarities and differences that represents (a), and (c) the meta-level of self that brings a convergence between (a) and (b). Subjectivity is the capacity for self-reflection whereby language and perception converge as (a) perception → (b) writing → (c) presence ← (a) perception. Therefore when Peirce proclaimed that man is a sign, he obviously meant a particular kind of sign, a “sign of itself” as (a) → (b) → (c) ← (a).

A parallel might be drawn between Peirce’s “a sign of itself” and the structure of Kurt Gödel’s proof of the incompleteness of formal axiomatic logical systems such as the system of natural numbers.34 Gödel proved that if the axioms are true then not all of the theorems can be proven, and if all of the theorems can be proven then not all of the axioms can be true. The key to Gödel’s brilliant mathematical achievement was the creation of self-referential statements about whole numbers, in whole numbers. While the details of Gödel’s proof may be complex, the self-referential structure of the proof is that of (a) the system of natural numbers represented in system (b) in terms of variables, logical operations, axioms, and theorems. Each single item in (b) is represented in (c) by a unique natural number now known as a Gödel number. Any number can be expressed in the form of primes in only one way. The number 9000, for example can be only expressed in terms of prime numbers as \(2^3 \times 3^2 \times 5^3\). In this way he was able to mathematically prove something about mathematics.35 The structure of the proof would then be (a) → (b) → (c) ← (a).

In a vital footnote Gödel wrote: “the true source of the incompleteness attaching to all formal systems of mathematics, is to be found… in the fact that the formation of ever higher types can be continued into the transfinite…. It can be shown, that is, that the undecidable propositions here presented always become decidable by the adjunction of suitable higher types.”36 Thus we have the distinction between object levels and meta-levels. Any meta-level can become an object-level when it becomes in itself the subject matter of a higher level. Thus the triadic structure can be continued into the transfinite when the meta-level becomes the object level of a further meta-level. We might designate this process as recursive transfinite meta-looping. Logocentrism presupposes Cartesian subjectivity. Derrida’s deconstruction of logocentric subjectivity, while different, is analogous to Kurt Gödel’s incompleteness.

**Darwin After Derrida**

The triggering event that commenced the evolution of the unique nature of the human mind remains a mystery. We seem to be faced with three possibilities:

1. Fossil remains will never furnish sufficient evidence to solve the problem of the evolution of the mind. If so, we will continue to be unable to choose among a number of interesting just-so stories.
2. A future discovery of some kind will provide an answer. It is difficult to imagine what kind of discovery could lead to a solution of the mystery.

3. The pieces of the puzzle we presently possess are sufficient to resolve the problem if they can be put together in the right way.

If the third possibility is the case then the missing part of the puzzle will likely be a very simple idea, as almost all great ideas are simple. We may be staring at it, but not recognizing it, like the large diamond hidden in plain view by the thief who attaches it to a crystal chandelier.

If the answer to the smoking gun is simple, why has not someone stumbled upon it before now? They may be looking for the wrong thing in the wrong place. The human mind is recursive and generative and is as different from the mind of the chimpanzee as bipedal mobility is from the quadrupedal knuckle walking of the ape. Chimpanzees can be trained to distinguish between and recognize one, two, three, and four, and to pick out the corresponding card with the appropriate Arabic numeral, much as a young child. The young child, however, after learning the first few numbers quickly goes on to grasp the idea of an integer list which increases each time with one. Neither arithmetic nor language evolved as such. Rather than looking for the evolution of language through selection on communicative abilities we should be seeking the evolution of a special kind of mind that evolved the capacity to generate mathematics and language.

The current paradigm that furnishes the foundations for sociobiology entails the assumption that our closest living relatives, *pan paniscus* and *pan troglodytes*, have changed little from our common ancestor. The Pan-adaptation paradigm has often been represented by a direct timeline with the common ancestor of all species of apes at the beginning and the chimpanzee at the end of the line marking the present. These living species of apes have been taken as the best prototype we have for our six million year old common ancestor. In 1992 a partial skeleton and the remains of a 4.4 million year old species of hominin, designated as *Ardipithecus ramidus*, were found in Ethiopia. The partial skeleton was that of a 110-pound (50-kilogram) adult female now named Ardi. For the next seventeen years this partial skeleton, the remnants of bones and teeth of a significant number of other individuals, and the fossilized remains of their environment, have been carefully studied and reconstructed by a team of scientists. In October of 2009 the results of their analysis were published in a special issue of *Science*. The reason that there has been a seventeen year time span between the initial amazing find and its introduction to the world was because the scientists involved realized that the results of their findings would produce a radical paradigm shift in the formulation of the evolutionary history.

The most astonishing revelations that dictate a paradigm shift are that *Ardipithecus ramidus* was completely bipedal and the bones revealed no history of an evolution from earlier quadrupedal knuckle walking. At the same time the structure of the feet was such that they were equally at home in the trees as well as on the ground. It now becomes clear that the genus Pan and humans each followed their own evolutionary trajectory. All this leads to the conclusion that the last common ancestor of humans and the two pan species was not chimpanzee-like. Ardi was only a million and a half years or so away from the estimated date of the common ancestor. The common ancestor, therefore, would more likely have been bipedal, arboreal, and non-knuckle walking.
We know that Chimpanzees and bonobos possess the mental capacity to recognize their mirror image as a sign of themselves.\textsuperscript{38} This is an undisputed fact. Such a self-reflective thought is triadic by nature. There is first, (a) the perceptual and phenomenological experience of the animal self in terms of visual recognition of its own body and internal emotions and feelings. Secondly there is (b) the image in the mirror as an iconic sign of (a). Thirdly there is the meta-level of thought where (a) is brought into convergence with (b) in the self-reflective thought (c) where the bonobo recognizes itself, rather than the image of another animal, such as is the reaction of a dog to its mirror image. The mental capacity of our early hominin obligate bipedal ancestors was at least equal to that of the bonobo and chimpanzee. Therefore they would equally have had the capacity to recognize a mirror image of themselves if a mirror had been available.

It is an obvious fact that, for we humans, the external reproductive organs function as iconic signs of sexual identity. Our own recognition of our sexual identity is self-referential. “I am female,” is a self-referential thought. Thus we have (a) the perceptual empirical self. (b) the iconic signs of sexual identity found on some members of the species and a different sign on others, and (c) the meta-level of cognition where (a) is brought into convergence with (b) at the level of meta-cognition. From the fact that humans now interpret the external organs of reproduction as iconic signs of sexual identity we can infer that they began to do so at some point in our evolutionary history. Since it is a much simpler idea than language, it likely took place before the emergence of language rather than after. The mental capacity for mirror image recognition and obligate bipedalism were a necessary and sufficient condition for the evolution of self-recognition, or in other words, subjectivity.

The structure of “I”, as a sign of itself, is similar to the structure of a Gödel number. The (b) of linguistic named identity that represents the (a) of the phenomenological-perceptual self of the sexed body converges in the meta-cognitive “I” as (b) \(\rightarrow\) (c) \(\leftrightarrow\) (a). Sexual difference is the first and most likely item of self-recognition, and it also would reflect the same structure. Certainly a bipedal hominin that had a self-reflexive mind with the capacity to recognize a mirror image of itself would also have the mental capacity to interpret its own external reproductive organs as an iconic sign of sexual identity and difference. Darwin after Derrida would shift the focus from the evolution of language to the evolution of non-Cartesian subjectivity.

**Freud After Derrida**

Natural selection, whether by adaptation or exaptation, may be the wrong selective process. Sexual selection can far better account for the rapidity of the encephalization of the hominin brain and the sudden appearance of language within the last hundred thousand years than can natural selection. The problem with sexual selection is that it entails females freely selecting males for reproduction and does not function effectively where female reproductive choice is limited by male coercion. Sexual selection could not be a primary selection mechanism for a male monosexual species such as our own has been throughout human history.

Sexual difference “plays an absolutely central role within the Freudian model, necessitating a separate treatment of male and female subjects” and that it is “a delineation which would obviously crystallize the opposition of self and other.” The paradox of Freudian psychoanalysis is that while Freud’s “narrative of male and female
subjectivity” is vastly distorted, centering as it does on male sexuality, it forever breaks 
male domination away from any foundation in biological determinism. 39 The French 
psychoanalyst, Janine Chasseguet-Smirgel, in her book Sexuality and Mind: The Role 
of the Father and the Mother in the Psyche writes, “Psychoanalytic theory does not escape 
this struggle between maternal and paternal law.” In fact the history of psychoanalysis 
reflects a dialectical process between male and female psychoanalytic theorists.

Derrida developed a concept of the a text as having a public part, and a part that is 
hidden. There is no synthesis but meaning crosses over in mirrored reversals and folds 
into each other. 41 He refers to binary opposition as two sides of a fold, or as separated by 
a hymen, “an operation that both sows confusion between opposites and stands between 
the opposites….”42 As stated by Derrida: “At the edge of being, the medium of the 
hymen never becomes a mere mediation or work of the negative; it outwits and undoes 
all ontologies, all philosophemes, all manner of dialectics. It outwits them and — as a 
cloth, a tissue, a medium again — it envelops them, turns them over, and inscribes them.” 43 Derrida writes:

What holds for “hymen” also holds mutatis mutandis, for all other signs 
which, like pharmakon, supplement, difference, and others, have a double 
contradictory, undecidable value that always derives from their syntax, 
whether the latter is in a sense “internal articulating and combining under 
the same yoke, hup’h’en, two incompatible meanings, or “external,” 
dependent on the code in which the word is made to function. But the 
syntactical composition and decomposition of a sign renders this 
alternative between internal and external inoperative. One is simply 
dealing with greater or lesser syntactical units at work, and with economic 
differences in condensation.

In Derrida’s dialectic there is no synthesis, no resolution, merely a passing back and 
forth and an accommodation. He provides a number of metaphors to illustrate, such as 
comparing dialogical logic to a machine. He writes:45

The question that poses itself for us might take this form: Must there not 
be some powerful utterance-producing machine that programs the 
movement of the two opposing forces at once, and which couples, 
conjugates, or marries them in a given set, as life (does) death?... Neither 
of the two antagonistic forces can break with this powerful programming 
machine: it is their destination; they draw their points of origin and their 
resources from it; in it they exchange utterances that are allowed to pass 
through the machine and into each other, carried along by family 
resemblances, however incompatible they may sometimes appear.

One of the more significant binary oppositions is that of sexual identity. Derrida has had 
a substantial effect on postmodern feminism by providing strategies for deconstructing 
gender and challenging both biological and cultural determinism regarding sexual 
identity. 46

Derrida’s deconstruction of phallocentrism, when applied to Freud, offers a solution 
to the contradictions and problems that has haunted psychoanalytic theory since the 
publication of “A Child is Being Beaten,” where Freud reported that young males were 
erotically aroused by the fantasy of receiving a spanking from a female, and young
females were erotically aroused by the fantasy of watching a boy being so disciplined. In the fantasies of both female and male children, it is a boy who is receiving the thrashing. Freud could equally have entitled his essay, “A Boy is Being Beaten”. Freud’s “A Child is Being Beaten” is primarily based on six of his patients, four females and two males. The fact that one of the four females was his own daughter, no doubt, gave Freud a special interest in the phenomena.

Freud concluded that this set of fantasies was not based on individual life experiences of the child but arose from something else. He called these Primal Phantasies, or in German, Urphantasien. If the judgment of Freud, and at least a substantial number of those who have studied the phenomenon known as masochism, is correct, and it is the case that masochism is not an individual perversion but a manifestation of an aspect of the collective mind, then it is evidence that it is a reflection of a psychic conflict that is shared as an aspect of the human condition. James Hillman, in The Myth of Analysis states, “We have by naming this (masochism) after Masoch, turned passion into pornography.”

From the perspective of an evolutionary psychiatry Stevens and Price point out that masochism still remains a mystery. “The question of how it is that painful and humiliating activities can be experienced as sexually pleasurable has generated a huge literature but has never really been solved.” It is obvious that females will select the more powerful and aggressive males because they are more able to furnish significant resources and protection. Aggression, however, can be dangerous to the female and her offspring. The ideal male, therefore, will be one who is strong and highly aggressive in competition with other males, but easily controlled. If our female ancestors had tested male submission through ascertaining the male’s reaction to female aggression, the males who were erotically aroused would have had a distinct advantage.

One of the few, possibly only, in depth studies of the sexuality of powerful men is that of Doctors Janus, Bess, and Saltus, published under the title, A Sexual Profile of Men in Power, based on information provided by 80 women practicing as expensive “call girls” over a seven-year period. They found that by far the most common service politicians required from call girls related to masochistic fantasies and fetishes that symbolized female domination and male submission.

The deconstruction of Freud’s phallocentrism takes psychoanalysis through the fold in being from “In the Name of the Father” to “In the Name of the Mother” along the lines suggested by the postmodern theorist Giles Deleuze in his study of male masochism. The French psychoanalyst, Janine Chasseguet-Smirgel, in her book, Sexuality and Mind: The Role of the Father and the Mother in the Psyche, writes: “What astonishes us in all of this is not that Freud’s pathways to knowledge were blocked in certain areas of his work, but that in spite of this he was able to pursue his researches so successfully and so far.” “Psychoanalytic theory does not escape this struggle between maternal and paternal law.”

Can we ascertain from Paleolithic art whether or not monosexual domination prevailed and, if so, which sex was dominant? The symbolic representation of this long period of human prehistory consisted of three kinds of images: female figurines such as the Venus of Willendorf and the leopard goddess of Çatalhöyük, male phallus wands or phallic images, and animal paintings. Most full figures of humans are primarily images of
females. While there are many phallic images, there are very few fully human male figures. As compared with the number of full figures of females, the number of full figure of males is rare; and even when they do appear, they are often found combined with a male animal image. The paradigm examples are the three cave wall drawings of male figures that are horned animals at the top with human legs and erect penises. In describing the conventions which these figurines seem to follow wherever they are found, Iain Davidson suggests, “What seems to be being observed in some part of the convention is a gendered opposition between female and other rather than one which might be mere representation of the sexes female and male, and in the same way as other artistic systems routinely represent humans as either male, female or without sex.” The structure of symbolic representation is that of the Subject and the Other, and if Davidson is right, in that the symbolic imagery system of the late Paleolithic period places the female as Subject and the male as Other, then Paleolithic *Homo sapiens* would likely have been female dominated. We can thus analyze the structure of gender as forming a quadrant of complexes.

<table>
<thead>
<tr>
<th>FEMALE AS SUBJECT</th>
<th>Male as Other</th>
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<tr>
<td>The Artemis Complex</td>
<td>The Dionysian Complex</td>
</tr>
<tr>
<td>MALE AS SUBJECT</td>
<td>Female as Other</td>
</tr>
<tr>
<td>The Persian Complex</td>
<td>The Eve Complex</td>
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In the paper, “Sexual Dialectics, Sexual Selection, and Variation in Reproductive Behavior,” Patricia Gowaty rejects the simplistic view of the conflict of reproductive interests between the females in quantity and the males in quality as ‘a battle of the sexes’ because “the benefit to cost functions of female — male interactions can be positive (cooperative), negative for one and positive for the other (competitive), and negative for both parties (spiteful), or null (indifferent).” Traditional sexual selection ideas focus on male reproductive strategies to control female reproduction and female counter-strategies to resist male control. Sexual dialectics makes clear that “selection on females to manipulate — control male reproduction also occurs.” Sexual dialectics is co-evolutionary, interactive, and dynamic, focusing on “a fuller range of possible interactions between the sexes rather than just competitive ones.”

The second astounding finding regarding *Ardipithecus Ramidus* was that there was little difference in size between the skeletons of the females and males, and the sharp large canine teeth of the living apes were not to be found. Lovejoy argues that there is evidence that the most unique characteristic of human reproduction, reproductive crypsis (ongoing sexual receptivity and absence of signs of ovulation) was also present in this ancient possible ancestor. The absence of these two signs of male-male reproductive aggression suggests that the male-to-male agonism associated with chimpanzees was absent in the socio-reproductive structure of *Ardipithecus ramidus*.

There are some marked similarities between Ardi and the bonobo. The bonobo are a female dominated species that also lack reproductive crypsis. They have ongoing sexual activity unrelated to reproduction such as sex between females. Sexuality seems to have replaced aggression. Male coercive copulation and reproductive infanticide is totally
absent. Freud after Derrida would shift the focus from natural selection or adaptation to monosexual domination as a primary strategy in the dialectics of sexual selection.

**Darwin and Freud After Derrida: Unfinished Business**

The nature – nurture split constitutes a deceptive bifurcation. Each pole of the dichotomy is reducible to the other. Humans are fully a part of the natural world and therefore culture is an aspect of nature. On the other hand our cognition of nature and science is in the form of concepts and language that are an aspect of culture. Not biologically determined but not culturally unbounded. Between the genes and culture there is a space of undecidability. The plasticity of monosexual domination, where females and males can pass through the fold in *being* between Subject and Other, proves that monosexual domination is a matter of seduction rather than of the genes. Where to place any human attribute in terms of nature or nurture is undecidable. The state of *being* human is neither entirely biologically determined nor is it culturally unbounded. How we bring the instinctual levels of the mind into being in the house of language and culture is not unrestricted, but neither is it genetically determined.

The neuroplasticity of the human mind and recent developments in evolutionary biology have undermined many of the earlier polar bifurcations that historically have maintained the two solitudes. In 1966 George C. Williams suggested in his book, *Adaptation and Natural Selection*, that while selection might take place at many levels, it functions primarily at the level of the gene. Since the recent consilience between Darwinian evolution and genetics a new science called Evolutionary Developmental Biology or Evo-Devo, has emerged that has shifted the focus from natural selection on random genetic mutations to the function of genes in the development of fertilized eggs to a fully developed adults. In a recent paper Terrance Deacon offers evidence that relaxed selection and trait loss can produce “progressive despecialization” in the neural circuitry of the brain, increasing the capacity for complexity.

With the evolution of meta-cognition the reproductive and self-preservation instincts emerged in the semiotic universe as Eros and Thanatos, the origins of civilization and its discontents. The evolution of subjectivity resulted in the experience of Cartesian duality – the homunculus feeling of being a soul inhabiting a body. The fear of death and the illusion of the immortality of the soul introduced a bifurcation where mind (the logos) was identified with the father and matter with the mother; the mind with man and the body with woman. While in many cultures male dominance is maintained through brutal force, the seductive powers of religion furnish its legitimization. It may turn out in the future that a postmodern sociobiology will be more important for the empowerment of women than the ideology of equality.

The debunking of metaphysical assertions cannot establish a foundation for ethical values, an enigma that Derrida was unable to resolve. A consilience between evolutionary biology and postmodern critical theory could provide an empirical foundation for moral judgments in terms of a science of life wherein the fold in *Being* between the Subject and the Other is deconstructed. Wilson closed his second book, *Consilience*, with the words:

“The search for consilience might seem at first to imprison creativity. The opposite is true. A united system of knowledge is the surest means of identifying the still unexplored domains of reality…. We are, it seems, Old World, catarrhine...
primates, brilliant emergent animals, defined genetically by our unique origins, blessed by our newfound biological genius, and secure in our homeland if we wish to make it so…. And if we should surrender our genetic nature to machine-aided ratiocination, and our ethics and art and our very meaning to a habit of careless discursion in the name of progress, imagining ourselves godlike and absolved from our ancient heritage, we will become nothing.”

If evolutionary biology is applicable to humans then it requires a consilience with postmodern critical social theory. Edward O. Wilson has made us an offer that we ought not to refuse.


42. *Ibid.*, 212.


44. *Ibid.*, 221.


53. Ibid., 28


57. Ibid.

58. Ibid.


60. Ibid., 74e1.


64. Wilson, supra note 2 at 298.