This paper presents the work of philosopher Susanne Langer and argues that her conceptualization of the human mind can provide psychoanalysts with a unique framework with which to theoretically combine interpretive and biological approaches to their work. Langer’s earlier work in the philosophy of symbols directs her investigation into the biological sciences along the lines of sentience and imagination, which in turn become the cornerstones of her theory of mind. Langer’s understanding of the continuing transformation of affect into language is a decisive contribution yet to be built upon by others.

INTRODUCTION

As psychoanalytic theory moves to integrate within itself the continuing advances being made in the neurosciences, and in particular affective neuroscience, it is very important that it hold onto the insights that have always distinguished Freud’s psychological ideas. While Freud would have a heyday working within the new sciences of neural complexity, attempting to understand the dynamic pattern formations of the most complex self-organizing system in the universe, he would nevertheless remain ensnared in psychology’s other domain: hermeneutics. Freud, the rigorous empirical scientist, became caught up in hermeneutics with the publication of the Interpretation of Dreams (1900). So he would remain
today, notwithstanding the advances he would enjoy in the neuro-sciences.

In spite of developing an effective psychotherapeutic method for healing through the interpretation of meaning, Freud never seemed to fully satisfy himself with the merit of doing so. He never seemed to understand, philosophically, how he could combine, so obviously necessarily, both a scientific and personal-historical or literary approach to examining the human mind. Indeed, the philosophical line between the natural sciences and the humanities today is as sharp as it ever was in the nineteenth and twentieth centuries, offering no real ongoing bridge between human biology and human culture.

What Susanne Langer provides is a dynamic, endogenous connection to bridge these two realms. With her appreciation of our symbolic capacity to continuously, imaginatively transform our biology, i.e., to render our affects into a new key, Langer provides for psychoanalysis a philosophical basis for the place of meaning and interpretation in the understanding of human lives. This place holds while making room for the “truths” that continue to be revealed by the burgeoning neurosciences.

Carrying on Cassirer’s integrative tradition of philosophy, some of whose work she has translated, Langer carves a middle philosophical ground between the logical positivism of the Vienna Circle and the ontological/existential work of Heidegger. Langer works within the objective sciences of evolution, but finds a way to properly locate human subjectivity as the essential topic of her investigation. As a philosopher originally of the arts, she does her homework in the sciences, thus putting herself in a unique position to unite scientific and artistic domains. Some of her science is out of

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1 Ricoeur (1970) would disagree, combining the two Freudian epistemologies thus: “Freud’s writings present themselves as a mixed or even ambiguous discourse, which at times state conflicts of force subject to an energetics, at times relations of meaning subject to a hermeneutics. I hope to show that there are good grounds for this apparent ambiguity, that this mixed discourse is the raison d’être of psychoanalysis” (p. 65).

2 Professional philosophy today is still split between the analytic and continental traditions that Langer bridges (Friedman 2000).
date, but this does not diminish the usefulness of her philosophical framework for understanding the human mind from both scientific and artistic perspectives within a single continuum. Langer’s scaffolding for examining the human mind is not presented for scientific testing, but for conceptual serviceability. Her poetic use of language for building this scaffolding may be distracting to some, but I believe it enhances the novel integrative model she builds.

The challenge for psychoanalysis is to understand the human mind as it is transformed by our unique symbolic capacity while maintaining its basis in our presymbolic animal nature. Langer’s conceptualization of the logical distinction between these two aspects of human mentality ironically allows her to cogently explain their seamless integration in human behavior. Langer’s work revolves around the deceptively simple notion of feeling. In contrast to current thinking regarding the nature of feeling and its relation to consciousness, as discussed below, Langer’s simplicity turns out to be compelling; she defines feelings not as something animals have but as something they do, and she equates this activity with consciousness. To act is to feel, and to feel is what it means to be conscious. For Langer, it is our animal feelings that constantly broker between the presymbolic and symbolic in our uniquely human mind.

Within this framework, Langer provides a single but comprehensive conceptual perspective for integrating the empirical and interpretive sciences, a critical integration that others fail to achieve. While we cannot examine human psychology simultaneously from empirical and interpretive positions, since we must choose between competing methods of analysis, we recognize the same central issue by whichever method we choose: our capacity to feel.

Since the 1982 publication of the last volume of Langer’s Mind: An Essay on Human Feeling, there has been a burgeoning of research in the neurosciences, with an explicit effort to tackle the problem of the biological basis of consciousness. The distinctions made philosophically by Langer and the distinctions made empirically today by neuroscientists exhibit undeniable parallels, whether or not scholars have read Langer, which shows how well she an-
ticipated current thinking. But more importantly, there are insights of Langer’s that neuroscience has yet to recognize, insights that would greatly enhance its efforts to understand consciousness and the human mind and would make neuroscientific work even more appealing to psychoanalysts.

Neuroscientists still do not fully appreciate the qualitatively different nature of human consciousness when it is transformed by imagination and symbolic activity. While they make many distinctions in levels of consciousness, they do not understand symbolic activity well enough to appreciate the radical shift it produces in conscious experience. Langer’s unique contribution is to recognize and elaborate upon the qualitative difference in the symbolizing mind without entirely leaving the realm of biology. From her philosophical perspective, she makes a place in natural history for the human project of meaning making. In other words, Langer provides a novel philosophical framework with which to bridge neuroscience and psychoanalysis.

The first and most lengthy part of this paper presents the evolution of Langer’s thinking, culminating in her final, three-volume work, *Mind: An Essay on Human Feeling* (1967, 1972, 1982). Following this presentation is a shorter section dedicated to more recent work in the neurosciences and psychoanalysis on consciousness, and in particular the work of Damasio (e.g., 1994, 1999, 2003), Edelman (e.g., 1989), Edelman and Tononi (2000), Modell (2003), and Panksepp (1998, 1999).

**BACKGROUND**

*An Overview of Langer’s Work*

*Feeling* is the central motif in Langer’s final work. It is the central point toward which her theory of biology leads and from which her theory of symbolism proceeds. Langer’s first critical move is to use the framework of feeling to conceptualize all conscious knowing. The extensively articulated system of sense perceptions that we experience as *qualia* derives from *feelings of impact*,...
the so-called objective stimuli that constitute our objective world. Conversely, feelings of autogenic action include all our so-called subjective responses, constituting our subjective world. We are accustomed to thinking about our internal state in terms of feelings, but the idea that knowing the world as we “see” it is equally based on feeling seems very odd. It is one of Langer’s significant conceptualizations, as argued below. It is also quite similar to Freud’s ideas about the parallels between external and internal perception, or the continuum of subjective experience (Solms and Nersessian 1999).

Langer’s next critical move is to recognize the distinction and place of imagination in human understanding. To imagine is to feel spontaneously. Imagination can function involuntarily, as it does in dream consciousness, or voluntarily, as it does when we speak. To speak is to symbolically render the world and ourselves into a “new key” through our imagination. It is the capacity to voluntarily control our imagination that is the basis of our symbolic activity and that produces our pursuit of meaning. Langer argues that our symbolic capacity developed not for survival purposes, but rather for the purpose of self-expression.

Langer’s “new key” in her first and most widely read book, Philosophy in a New Key (1942), refers to the shift in philosophical inquiry from truth to meaning, based on a new philosophical appreciation for self-made symbol systems in human transactions. Langer makes a case for distinguishing between the use of self-made symbols and the use of naturally occurring signs as a context for behavior. In their symbolic transformations of the world, humans live in a radically different environment. Langer’s elaboration upon the variety of symbolic forms in Feeling and Form (1953) is what leads to her investigation of the biological basis of this symbolic

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3 Qualia is a term used by philosophers to refer to the phenomenal aspects of our mental lives, e.g., the qualitative experience of redness in seeing a red object. The nature of qualia is central to philosophical debates about consciousness and the mind-body problem.

4 In using the expression self-made, I am not implying that individuals create symbol systems alone.
capacity. In her final, three-volume work, Langer (1967, 1972, 1982) outlines the natural evolution of feeling or consciousness that forms the basis of this unique characteristic of human mentality. In the introduction to her last book on mind, Langer (1988) disclaims any attempt to prove the “sole rightness” of her approach, suggesting that the “value of a philosophical outlook does not rest on its sole possibility, but on its serviceability” (p. xv).

Langer’s Work Prior to Mind: An Essay on Human Feeling

Langer comes to her understanding of mind as the transformation of feeling based upon her previous work in the logical analysis of signs and symbols (1942) and the development of a philosophy of art (1953). She sees the attack on the “formidable problem of symbol and meaning” (Langer 1942, p. viii) as the keynote of philosophical thought; in this way, she follows the tradition of Whitehead, Russell, Wittgenstein, Freud, and Cassirer, among others.

Langer asserts that the emergence of symbol and meaning in human activity derives from the evolution of a uniquely human emotional need to express or conceive of ideas. For her, the impractical nature of early symbolic behavior in the natural history of the human species, e.g., ritual and art, suggests that symbol use did not evolve as an extension of instrumental activity. Symbols make use of sense data, but not to improve practice. They express ideas. “The sign is something to act upon, or a means to command action; the symbol is an instrument of thought” (Langer 1942, p. 63). Words are a product of our collective imagination. While they mediate between our selves and the world, as symbols they do so only indirectly through the conceptual connotations or ideas that they project about the world. The failure of philosophers of language in the first half of the twentieth century to recognize language as an imaginative creation similar to other symbolic creations was cor-

5 Gary Van Den Heuvel published an abridged edition of Langer’s three-volume work in a single volume (Langer 1988), with the “aim of introducing Langer to a wider audience, with the conviction that her magnum opus deserves a broader readership than it has achieved” (p. viii).
rected by those such as Sapir, who, according to Langer (1942), recognized that

. . . it is best to admit that language is primarily a vocal actualization of the tendency to see reality symbolically . . . and that it is in the actual give and take of social intercourse that it has been implicated and refined into the form in which it is known today. [pp. 109-110]

Early twentieth-century philosophers of language also failed to appreciate the intellectual import of nonscientific, e.g., artistic, thinking. Langer asserts a formal similarity between discursive (i.e., scientific) and nondiscursive (i.e., nonscientific) symbolisms, elevating the latter as serious modes of thought and qualifying the former as intellectual creations. While we intelligently use signs in our environment to guide our behavior, as all animals do, we appear to be the only species to function intellectually in using symbols to seamlessly guide our behavior as well.

In Feeling and Form (1953), Langer turns to the nature and import of symbolic projection in the arts—what she refers to as presentational, as opposed to discursive, symbolism. Many agree that art reflects something of our subjective nature. Some suppose that art attempts to stimulate (or soothe) feelings in the observer, or symptomatically express feelings actually experienced by the artist during the process of creating the work. Langer understands art, rather, as the projection of a conception of subjective feeling. Presentational forms represent the intellectual formulation of an idea, the making of something perceptible in order to convey an understanding of something felt but imperceptible.

The prime function of art is to make the felt tensions of life, from the diffused somatic forms of vital sense to the highest intensities of mental and emotional experience, “stand still to be looked at” . . . The expression of such ideas, however, reveals the nature of what is expressed in a direction that is not open to actual experience: the unfelt activity underlying every event that enters the state of feeling. [Langer 1988, pp. 51, 66]
It is from her theory of art that Langer formulates her notion of mind: a continuously shifting state of feeling arising from the unfelt depths of our being, continuously symbolically transformed.

Langer calls feelings of impact *objective* because they form the basis of our symbolic descriptions of the world, which we commonly take to be “natural” signs found in the world. We are seduced into believing that our descriptions of the world are based on a natural language of signs that we learn to read. Our common sense does not remind us that the world, albeit existing beyond our description of it, does not present itself in any language, and to know it in a language is to live symbolically within it (Rorty 1989). This is not to say that we do not read natural signs in the world as other animals do, but when we speak of the world, we know it symbolically. Feelings of impact can also be considered “objective” because they lack the sense of urgency or intensity that we associate with what we think of as “real” feelings, “subjective” feelings of our own responsivity.

While the singular, often unequivocal projection of language makes it powerful as a tool for practice beyond its origins in expressiveness, it is, for the same reason, limited in its capacity to express the complexity of autogenic feelings of tension and rhythm. The rich ambiguities of artistic images, on the other hand, conjure up a good sense of the depths of unfelt organic activity from which our feelings emerge. It is these unfelt depths that make the internal tensions that we *do* feel so powerful and so hard to put into words.

Langer’s first two books set up a veritable gulf between the natural world of signs in which animals *intelligently* behave and the imagined world of symbols in which human beings *intellectually* conduct their lives. In her final, three-volume work, she exhaustively reviews a very broad range of scholarly literatures, from biochemistry and evolutionary biology to anthropology, aesthetics, and mathematics, and constructs a basis for elaborating the image of mind that she has begun to create in order to bridge the gap between sign and symbol.
MIND: AN ESSAY ON HUMAN FEELING

It was the discovery that works of art are images of the forms of feeling, and that their expressiveness can rise to the presentation of all aspects of mind and human personality, which led me to the present undertaking of constructing a biological theory of feeling that should logically lead to an adequate concept of mind, with all that the possession of mind implies. [Langer 1988, p. xiii]

The biological theory of feeling developed in this work presents a philosophical and conceptual foundation for an authentic science of mind. Langer believes that academic psychology, in its rapid attempt to achieve “scientific” (i.e., objective and measurable) status, bypassed a period of philosophical gestation necessary for the formulation of generative ideas, resulting in a pseudoscience of behavior. For Langer, a philosophical framework of generative concepts produces a coherent image, and “only an image can hold us to a conception of a total phenomenon, against which we can measure the adequacy of the scientific terms wherewith we describe it” (p. xii).

Mind: An Essay on Human Feeling (1988) reads as both a “presentational” and a “discursive” piece of literature, a work of both art and science. As stated previously, much of the science needs to be updated, and some readers may not agree that the poetic use of language enhances the value of the work. But as a philosophy of mind, Langer’s conceptual framework is as relevant as ever to current scholarship. Her philosophical integration offers a unique solution to a major theoretical problem still plaguing psychoanalytic theory, today focused on the relevance of affective neuroscience to psychoanalytic explorations of meaning. Langer provides a way to both connect these domains and render them apart. While fully appreciating the affective basis of human mentality, she posits a qualitatively different form of experienced meaning that is constructed within our thoroughly symbolizing minds. It is Langer’s appreciation of the logic of the affective symbolic process that makes her both unique and important today for a psychoanalytic philosophy of meaning.
The Concept of Feeling

For Langer, to feel is to do something, not to have something. She describes feeling as the psychological phase of organic process, arising out of the great complex of organic activity that constitutes the living organism, a dynamic state constantly changing as previously unfelt processes build into perceived experiences of tension. While the actual neurological processes that constitute subjective feeling are far from being understood, it is believed that neuroscience may one day be able to specifically describe the neurodynamics involved. Langer’s description does not begin to address the mechanisms that science may one day realize, but it is nevertheless an intuitive and compelling account, and will in all likelihood accommodate the science when it comes. This is not an irrelevant achievement for psychoanalysts to pay attention to.

Continuing in the same poetic yet also conceptually valuable vein, Langer describes the continuous dynamic activity of the organism that is always in transaction with the surrounding environment, the latter determining what is given and the former determining what is taken. Feelings arising in this vital activity are experienced in one of two ways: as feelings of impact or as feelings of autogenic action. With the elaboration of special receptor organs, sensory activity is not only felt as impact, but also as qualitatively different kinds of impact. As counterpart to this centripetal activity—and, indeed, with seemingly far greater intensity—the central nervous system itself is constantly functioning in the absence of specific external stimulation, and this centrifugal activity is experienced as a texture of emotive tensions. These two realms, the realm of sensibility and the realm of emotivity, can be labeled as the objective and the subjective modes of experience—although as Langer (1988) says, “Any felt process may be subjective at one time and objective at another, and contain shifting elements of both kinds all the time” (p. 13).

The Concept of Act

Langer’s philosophical scaffolding for a biology of feeling is predicated on a dynamic of acts, once again more poetically than
scientifically rigorously described, but nevertheless conceptually intuitive. Her image of life pictures a continuum of activity, a process composed not of discrete episodes but of different phases and patterns of activity. The elements of this activity may be termed *acts*, for it is in the relations among these acts that patterns of biological activity become increasingly concentrated, intense, and articulated, until a phase of being felt is reached. An analysis of acts leads to

. . . further and further acts subsumed under almost any act with which one chooses empirically to begin . . . . They [the intricate life processes] show rhythms within rhythms, interlocking timed sequences of chemical changes, electrical fields and currents that induce the chemical actions or, conversely, are generated by them, the most elaborate physical processes under a network of homeostatic controls. [Langer 1988, pp. 108-109]

Although Langer says a causal order of acts might be theoretically, if not actually, specifiable (and this may be where neuroscience will take us someday), she suggests that relations between acts are more usefully pictured as a pattern of motivation, every act arising in a constellation of other acts in a process of induction. A potential act may never reach fruition, but may contribute to the matrix of life as an impulse, abrogated in its expression. Langer’s picture is a dynamic not only of actual activity, but also of all the tensions inherent in potential acts. Out of this fabric of impulses, those completing themselves are in turn concatenated into series, sequences of acts of a discernible form that repeat themselves over and over, comprising the self-continuing rhythms that constitute biological agency.

Langer’s (1988) motif of acts ties together her entire philosophy, again in more poetic than rigorously scientific language. Acts are the unifying form, from the “chemistry of protoplasm to the psychology of man” (p. 159). Langer conceives of biological evolution as “a pattern of acts, rather than of the anatomical changes that form the record of acts” (p. 146). Similarly:
a germ cell carries a “genetic code,” not as a “blueprint” to be followed or a set of “instructions” to be obeyed, but as an organically engendered crowd of suspended activities ready to resume their advance whenever possible in any subsequently possible ways. [p. 142]

In sum, “every discovery makes the living organism look less like a predesigned object and more like an embodied drama of evolving acts, intricately prepared by the past, yet all improvising their moves to consummation” (1988, p. 143). Rhythm is the organization behind the multiple concatenations of acts, sequences within sequences, held together in a temporal pattern such that biological activity may be “conceived as tension patterns expressed in substance, which hold their form by a staggering complex of rhythmized acts” (pp. 159-160), each act preparing for its repetition in the cadence of its consummation.

Individuation and the Evolution of Feeling in Instinctive Behavior

Langer’s (1988) evolutionary picture of life is characterized by the dialectical processes of individuation and involvement, the two extremes of the great rhythm of evolution. “The most primitive act of individuation is the isolation of a protoplasmic unit by a completely surrounding membrane, selectively penetrable under osmotic pressure” (p. 128). At the same time, the dynamics of reproduction involve every organism with other organisms in this process of individuation.

With the evolution of a peripheral surface between the individuated organism and its environment, the potential arises for activity of sufficient intensity to engender a psychical phase, “a moment of intraorganic appearance as sensation” (p. 157). As more and more of the animal’s activities include a psychical phase, the creature’s behavioral actions fall increasingly under the influence of “felt” encounters, thus resulting in a behavioral repertoire guided by feeling. In turn, the animal’s responsive behavior develops an organization of intensity sufficient to engender a psychical phase, i.e., an experience of emotion. Thus arises for the animal a perceived distinction between inside and outside.
With the growth of life, the growth of acts in size and intensity, and
the emergence of an intraorganic phase to individuated biological
activity, a shift in natural history occurs comparable to the shift
that took place with the evolution of life. With the emergence of
feeling, i.e., consciousness, value arises: “For value exists only where
there is consciousness. Where nothing ever is felt, nothing matters”
(Langer 1988, p. 165). Aside from the more poetic than scientific
conceptualization expressed here, psychoanalysts may take issue
with the idea that only things that are felt matter. Certainly, there
are evolutionarily valuable processes that are never felt but that
nonetheless matter. But emotional processes, i.e., processes of
valuing, even in their most primitive form, generally include a sub-
jective experiential state (see Panksepp 1998). To this extent, one
can conclude that only what is felt matters.

An organism is always advancing, doing everything it can do
along a continuum of internal to external activity within the con-
fines of a particular environment. The repertoire of instinctive beha-
vioral tensions a creature inherits is an extension of its inherited
organic tensions, expressed in shifting motivational patterns ad-
vancing in shifting environments. Langer (1988) describes it thus:

At the low activity level of plants, which is normally a
purely somatic level, contacts with environmental stimuli
motivate unequal rates of metabolism and mitosis, so roots
grow vigorously toward a source of food, buds open fast-
est where light and warmth reach them most freely, etc. It
is typical of animals, however, to unfold their behavioral acts particularly under the influence of external events,
so that more or less acute outward changes are reflected
in the motivation of overt acts, making those acts appear
like direct mechanical effects of the stimulus. [p. 171]

Langer sees the instinctive behavior of animals as always proac-
tive rather than reactive; behavior is always a matter of the advanc-
ing consummation of acts, albeit often requiring extensive accom-
modation to the very stringent constraints of the environment.
When instinctive behavior is carried out consciously, it is guided by
both central and peripheral feeling, but only in the human animal is this feeling transformed into a conception of purpose:

We human agents hold our acts together by a conception of purpose and means . . . . In animal acts, the overall tension is preformed in the impulse, and the act is apparently not controlled by an image of external conditions to be achieved, but by a constant internal pressure toward its consummation . . . . Such complete patterns are not found in human lives; all their elements may occur, but they have been fragmented by the pressions of conceptual processes so that there is no automatic sequence nor order of detailed, unpromeditated action any more. [Langer 1988, pp. 189-190, 193]

This is Langer’s bridge between the biology of feeling and the cultural experience of human meaning: conceptions of purpose.

**Social Behavior**

Langer discusses at length studies of social and communicative behavior in animals. She does not dispute empirical findings, but takes issue with interpretations. For Langer, animal behavior is predicated on the intelligent reading of naturally occurring signs in the animal’s environment, including the reading of social signs from conspecifics, i.e., other members of the animal’s species. In a highly developed but nonconceptual (that is, nonsymbolic) emotional animal, subjective and objective feelings are confused—what is seen is confused with what is felt—so that the emotionally charged behavior of one animal is motivating to the easily suggestible conspecific, in a kind of contagious fashion. Animals respond in a literally empathic way to each other, as opposed to the more sympathetic response seen in a symbol-using species. Animals live in communion rather than in real communication with each other.

**The Evolution of Imagination**

The evolution of the human mind, as conceptualized by Langer, emerged from a set of capacities found in lower species but
uniquely conjoined in the human species to render the potent mentality we call human thought. The rapid eye movements of mammalian sleep, for instance, may indicate a constantly present cerebral activity in all mammals, indicative of an intense nervous activity that has evolved in higher species, presumably leading to a great refinement and quickening of every sort of peripheral and central feeling. Neural mechanisms for the production of images may have evolved in these animals as a defense against the unbearable rise in nervous stimulation that threatened to overwhelm the organism. “The eschewed behavioral consummation of a started impulse is replaced by the formation of an image in the visual system, especially in the cortical part, or by some comparable, purely sensory event” (Langer 1988, p. 253).

The conjoining of sensory images with emotional color may account for the unique potency of human imagination:

For we are overburdened not only with excessive sensibility, but also too many emotive impulses, certainly more than can be freely, overtly spent, especially in the social context of human life. So, while animal hallucinations (if there be any) probably pass in kaleidoscopic fashion without any interest except change (emergence, fading, succession), ours tend to pick up emotional values. [Langer 1988, p. 262]

The emergence of dreaming as a physiological process for the regulation of extensive sensory functioning is coupled in the human species with the regulation of autogenic emotive impulses, profoundly elaborated in the complexly social human animal and necessitating imaginative completion for the well-being of the organism. These intense emotive impulses drive the projective dynamic of symbolic behavior.

A shift from involuntary to voluntary control was likely the last ingredient in the evolution of imagination:

For eons of human (or proto-human) existence, imagination probably was entirely involuntary, as dreaming generally is today, only somewhat controllable by active or pas-
sive behavior, in the one case staving it off, in the other inviting it. But what finally emerged was the power of image making. [Langer 1988, p. 265]

A neuroscientific understanding of imagination is probably a long way off, depending on how it is defined. If imagination is equated with cross-modal cognition, as Modell (2003) defines it (this is discussed below), then it will be less difficult to investigate neurologically. But if imagination requires a neurological understanding of subjective experience, then it will be more difficult to explicate. Langer’s description is far from scientific, yet again there is a certain resonance with our experience, which allows her description to function effectively in the conceptual framework she is building for understanding human mentality.

*The Evolution of Symbolic Functioning*

The integration of imagination into a waking life of conscious feeling and control, and the spread of this imaginative capacity from private to public uses—e.g., a shared language—forms the basis of the uniquely symbolic human mind.

Symbolism is the mark of humanity, and its evolution was probably slow and cumulative, until the characteristic mental function, semantic intuition—the perception of meaning—emerged from the unconscious process Freud called the dream work into conscious experience. [Langer 1988, p. 268]

With the human animal, a new waking capacity arises apart from the constancy of practical behavior: the capacity to project emotional tone onto arrested perceptions and to intuit meaning. Arrested perceptions command a sense of awe: “That is the momentous step, from form perception to the sense of significance” (Langer 1988, p. 270). Conceptual capacity, Langer suggests, might have arisen from the early vociferous accompaniment of ritual, the earliest communal expression of formalized feeling. With the evolution of ritual, human sociality moved from body contact, gesture, and emotional vocalization to mental contact. In the case of dance,
for example, each dancer could have called up his/her own images in a private symbolic process. The sound patterns intoned in the celebration could then have lent themselves to conjuring up, apart from the activity of the dance, the multiple private images with their cargos of feeling. When these sound patterns were uttered and recognized publicly, a shift may have occurred:

The image is a genuine conception; it does not signalize or demand its object, but denotes it. Of course, this conception itself is not communicable, for it is covert, purely private, but the things remembered are public and the sounds activating the private images are public; they evoke images in other persons too, by arousing memories of roughly the same moments of dance action . . . . and suddenly the symbolic function shifts from the several private images to the vocal fragment that evoked them all concomitantly, so meaning accrues to the phrase, other beings understand. [Langer 1988, p. 276]

Thus, sounds move from sign to symbol, from action to thought, and integrate private and public aspects of mind in the evolution of language.

The Pervasiveness of Symbolic Functioning

Symbol use transforms every aspect of human life. The human child develops as a symbol user in a symbolically defined environment; the instinctive unity of the young animal that is absent in the human child is replaced by the symbolic function. We grow up using names without knowing what naming is; having learned to speak, we cannot do otherwise—our very perception varies according to our particular language:

Language, despite the fact that its early development requires the influence of a speaking society during the early years of each individual life, is not acquired only for communal purposes, but even as it is learned penetrates the entire system of cerebral activities, so that perception and fantasy and memory, intuition and even dreaming take
their special human forms under its continual and increasing influence. [Langer 1988, pp. 294-295]

Although it seems that the words we use are derived naturally, i.e., that the world itself is labeled, this is not the case. While the world, including ourselves, certainly exists outside our descriptions, it is through our descriptions that we know it (Rorty 1989). This knowledge is framed in a particular time and place:

Time is the new dimension which verbalizing and its mental consequence, symbolic thinking, have imposed on the human ambient, making it a world with a homogeneous spatial frame and a history . . . . Society, like the spatiotemporal world itself, is a creation of man’s specialized modes of feeling—perception, imagination, conceptual thought, and the understanding of language. [Langer 1988, pp. 288, 298]

Action and thought, presymbolized and symbolized feeling, become inextricably joined.

The Subjective/Objective Dialectic

Human experience is constituted by a constant integration of inner and outer orientations, subjective and objective feeling. The locating of the opposition between subjectivity and objectivity within a single realm of feeling or consciousness is critical to the concept of mind painted by Langer. The subjective/objective distinction has been conceived in Western thought as the distinction between human consciousness and the world—the world as objective and our consciousness of the world as subjective. Science has passed off consciousness as mere subjectivity and, therefore, as unimportant to scientific study. Langer asserts that scientific study itself is a form of consciousness. She begins with consciousness as the inescapable starting point, within which we can identify the experiential distinction between subjective and objective. What we feel as our own activity we label subjective, and what we feel, i.e., observe, as activity in the world we label as objective. The dialectic
between these realms of feeling is the basis for the dynamic processes of a symbolizing imagination:

The dialectic which makes up that life is a real and constant cerebral process, the interplay between two fundamental types of feeling, peripheral impact and autonomous action, and objective and subjective feeling. As fast as objective impingements strike our senses, they become emotionally tinged and subjectified; and in a symbol-making brain like ours, every internal feeling tends to issue in a symbol which gives it an objective status, even if only transiently. This is the hominid specialty that makes the gulf between man and beast, without any unbiological addition. [Langer 1988, p. 292]

INTEGRATING NEUROSCIENTIFIC AND PSYCHOANALYTIC THEORIES OF MIND: LANGER’S ARTICULATION OF A SINGULAR FIELD

Langer’s philosophical recognition of the logical distinctiveness of symbolic behavior provides a framework for psychoanalysis to incorporate advances in the neurosciences, without diminishing the realm of uniquely imagined human meaning that can only be understood through processes of interpretation. The neuroscientific and psychoanalytic investigations of Damasio (e.g., 1994, 1999, 2003), Edelman (e.g., 1989), Edelman and Tononi (2000), Modell (2003), and Panksepp (1998, 1999) outline theories of mind that are rich in describing the affective basis of the experiential self, but they do not take into account the transformation of affect through human imagination. While Modell acknowledges the critical importance of imagination, his definition of imagination does not do it justice. Damasio, Edelman, Modell, and Panksepp do not really get beyond human action, albeit motivated—consciously or not—by affective valuing. Value serves them well, but for action only.

For Langer, imagination is about not acting. It is about having ideas for the sake of having ideas. These ideas, of course, matter
All work in the neurosciences, as indeed in psychoanalysis, is grounded in evolutionary theory and places emphasis on the active mind, just as Langer does. Langer proposes that the evolution of our human capacity to create ideas about the world was an adaptation in its own right, for purposes not of practice but of expression. Darwin’s theory of sexual selection supports this sort of adaptation. One might suggest that the human capacity to control imagination and render the world symbolically into a human environment of complex meaning is an exaptation, a spandrel: a byproduct of an earlier adaptation for survival.

Geoffrey Miller presents a compelling account of Darwin’s theory of sexual selection in The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature (2000), drawing a clear distinction between Darwin’s ideas of natural selection for survival and sexual selection through mate choice.

Most people equate evolution with “survival of the fittest,” and indeed most theories about the mind’s evolution have tried to find survival advantages for everything that makes humans unique . . . . Ever since the Darwinian revolution, this survivalist view has seemed the only scientifically respectable possibility. Yet it remains unsatisfying. It leaves too many riddles unexplained. Human language evolved to be much more elaborate than necessary for basic survival functions. From a pragmatic biological viewpoint, art and music seem like pointless wastes of energy . . . . This book proposes that our minds evolved not just as survival machines, but as courtship machines . . . . Those proto-humans that did not attract sexual interest did not become our ancestors, no matter how good they were at surviving. [pp. 1-3]
Sexual selection is about choosing mates who will contribute to offspring. Characteristics of species that evolved through sexual selection were preferred because they were “taken to be” indicators of reproductive fitness (not, of course, consciously). Indeed, they were indicators of fitness. The peacock’s tail is the classic example. While the tail in fact hinders the survivability of the peacock himself, since it is big and heavy and very salient, it indicates a robust nature that peahens can use to identify a good mate. For the human species, Miller (2000) notes that:

By intelligently choosing their sexual partners for their mental abilities, our ancestors became the intelligent force behind the human mind’s evolution . . . . During human evolution, sexual selection seems to have shifted its primary target from body to mind. [pp. 4, 10]

Spandrels are automatic byproducts of evolutionary adaptations and are, therefore, nonadaptive in their origin (Gould 1997). However, such byproduct features are available subsequently to be coopted by a new function, and are often mistaken as a primary adaptation because of the robustness of this later function. Gould suggests that “mating display” is a function that may coopt spandrels. This is sexual selection. Presumably, however, imagination represents a primary adaptation for neuroregulatory purposes, and is not a byproduct of some other adaptation. Nevertheless, it was, presumably, subsequently coopted for purposes of “mating display.”

The biological framework of sexual selection for human psychology is the perfect complement to Langer’s theory of mind, offering an evolutionary scaffolding for all the varieties of cultural symbolisms that transform human society through human imagination.

Basic Neuroscientific Framework

The work of Damasio (1994, 1999, 2003), Edelman (1989), and Edelman and Tononi (2000) is particularly relevant to this paper,
since they have shared their extensive neuroscientific research about consciousness in many books written for an interested public. Damasio (1999) states:

Consciousness is the rite of passage which allows an organism armed with ability to regulate its metabolism, with innate reflexes, and with the form of learning known as conditioning, to become a minded organism, the kind of organism in which responses are shaped by a mental concern over the organism’s own life. [p. 25, italics in original]

Edelman’s theory of mind posits a continuously self-organizing process of categorization and recategorization, in distinction to the many computer models of mind in cognitive science that characterize mental activity as programmed information processing (this characterization actually pushes these computer models outside an evolutionary framework). Information processing models depend on prearranged categories in the world and precise neural “software” for the manipulation of categorized information. According to these models, replicate copies of information from the world are made, stored, retrieved, and updated. For Edelman (1989), the world obeys the laws of physics but is not a priori categorized. Mental activity has evolved precisely congruent with this capacity to categorize and recategorize in a continuously dynamic fashion.

Self versus Nonself

Edelman’s (1989) research on the nature of the brain-mind is predicated on the conceptualization of a biologically based self/nonself distinction inherent in the human nervous system. This distinction involves differing structural and functioning portions of the brain that support value (self) versus perceptual (categorical or nonself) functioning.

While neural parts of the first kind [value] (e.g., the hypothalamus, pituitary, various portions of the brain stem, amygdala, hippocampus and limbic system) operate within developmentally given parameters, those of the second
kind [category] (e.g., cerebral cortex, thalamus, and cerebellum) operate largely through ongoing exteroceptive sensory interactions with the world, that is, through experience and behavior. [Edelman 1989, p. 94]

The constant interaction between these two systems of neural functioning is the basis of memory and learning and is enhanced by the evolutionary emergence of consciousness. Edelman pictures consciousness as an ongoing bootstrapping experience that occurs as current value-free categorization takes place in conjunction with a value-dominated, value/category memory.

The homeostatic or value-maintaining nervous system is dissimilar to the perceptual nervous system in terms of its accessibility and the richness of its “topographic mappings.” Value states are “one of the essential bases of primary consciousness, but do not provide its main content” (Edelman 1989, p. 101). Input from this internal homeostatic value system dominates over external perceptual input from the world by gating, dampening, or reducing the latter according to internal needs.

The two things that must be explained to understand consciousness, according to Damasio (1999), can also be labeled as self versus nonself: (1) the “movie” in the brain, or the philosophical problem of qualia, and (2) the sense of self in the act of knowing: “The pathbreaking novelty provided by consciousness was the possibility of connecting the inner sanctum of life regulation with the processing of images” (p. 24). We do not typically think of our experience of the world as a “movie” in our brain or as the philosophical problem of qualia, but we understand exactly what Damasio means. We also know exactly what is meant by a sense of self in the act of knowing.

Langer’s theory enriches the distinction between our experience of self and nonself by obliterating it at some more fundamental level. While we think of knowing ourselves from a first-person perspective and knowing what is not ourselves from a third-person perspective, both ways of knowing depend on the same process: what Langer refers to as the intraorganic state of feeling that arises with sufficiently intense mental activity. The intuitive but often
problematic distinction between self and nonself, subject and object, is both preserved and eliminated in Langer’s conceptual framework by an emphasis on the unitary nature of the capacity to feel as the basis for both types of knowledge.

Primary versus Higher-Order Consciousness

Panksepp’s (1998) work on affective neuroscience not only emphasizes the significance of emotions as the continuing foundational basis of human psychology, to which our sophisticated cognitions still report, but also, throughout his work, he emphasizes the significance of emotional feeling. While emotional systems (Panksepp suggests that there are many different ones) obviously function very much subconsciously, Panksepp returns again and again to the importance of internally experienced affective states for the generation of behavior. Panksepp does not try to move beyond this primary consciousness, so he does not run into the problem that Langer’s philosophical framework can solve for so many theorists of mind, namely, the move from primary to secondary consciousness, the move from experience to words. Panksepp’s description of primary consciousness mirrors Langer’s; he notes that the mere presence or experience of feelings is what consciousness really is, that talking about consciousness of feelings is necessarily redundant. Much as Langer describes these feelings, Panksepp (1998) talks about feelings not only of affective states, but of such things as “redness,” a prototypical example of qualia:

Redness, like all other subjective experiences, is an evolutionary potential of the nervous system, one that was “designed” to allow us to appreciate the ripeness of fruits, the

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6 In the first issue of Neuropsychoanalysis (1999), where Panksepp is asked to address the potential linkages between psychoanalytic and neuroscientific observations, he indicates an appreciation of the complexities involved in moving from primary to secondary consciousness, the complexities that Langer so uniquely tackles: “Regrettably, modern neuroscience has not been adept at conceptualizing how the internal neurodynamics of the brain weave psychological realities by blending evolutionarily provided abilities with neurodynamic symbolizations of ongoing world events” (p. 33).
readiness of sexuality, and perhaps even the terror and passion of blood being spilled. [p. 14]

Edelman (1989) distinguishes between primary and higher-order consciousness along the lines of Langer’s sign versus symbol mentality, describing the latter as the consciousness of consciousness. But for Edelman, this represents merely a quantitative addition of an evolved phonological capacity that produces a quantitative addition to cognition in the form of a syntax added to semantics.

In contrast to Edelman, Langer envisions a symbol-using mind as a qualitatively different sort of mentality. Her conceptual leap emphasizes the evolution of imagination, and from this imaginative capacity the emergence of a uniquely human need to express ideas. Such a need is biologically consistent with Darwin’s theory of sexual selection, or with the cooptation of a neuroregulatory adaptation (imagination) for purposes of enhancing mating. We are attracted to each other in terms of the way we think.

While Edelman recognizes a shift in consciousness and mentality evolving from the use of symbols, he misattributes to this consciousness merely a greater survival function. He never fully appreciates the imaginative aspect of symbolic functioning, since for him symbols only provide more precise instrumental support for our practical activities. Edelman does not understand that the truly imaginative nature of symbolic functioning expresses a truly different pursuit: the pursuit of meaning.

The distinctions Damasio (1999) makes in conceptualizing the development of consciousness mirror Langer’s, but his labeling of these distinctions is not as compelling as hers. Damasio makes a distinction between (1) emotion, (2) the feeling of emotion, and (3) knowing that one feels emotion. He equates consciousness with this last position—i.e., consciousness is knowing that one feels something. Langer makes a more commanding case with the simple idea that consciousness is no more than the presence of feeling; of course, for Langer, to feel is an exquisite capacity. To subsequently “know” that one feels is a statement that can only be
made in terms of a higher order of consciousness, what Langer alone fully appreciates as an act of imagination.

Neither Damasio nor Edelman appreciates the radical shift in consciousness that accompanies the advent of symbolic thinking. They do not understand that the project of symbolic thinking is to make the world explicitly meaningful, beyond whatever advantages we gain for survival by conceptualizing the world and our place in it.

**Imagination**

Modell’s latest book (2003) addresses the same issues of imagination and meaning that Langer tackles, but once again stops short of appreciating the radical transformations our symbolizing minds make in the process of using imagination to create explicit meaning out of affect. Modell makes extensive use of Edelman’s work, as well as the philosophical work of Lakoff and Johnson (1999). This latter work is particularly important here.

Lakoff and Johnson suggest that the human mind is inherently embodied, that thought is mostly unconscious, and that abstract concepts are largely metaphorical. They argue that human reasoning, the object of investigation in Western philosophy, is predicated on the nature of our bodies, our brains, and our bodily experiences. They argue as well that reasoning is a capacity that has evolved in animals, that is intimately connected to emotion, and that has arisen from the sensory, motor, and other neural systems that are present in all animals. Modell focuses on the idea of metaphor in Lakoff and Johnson’s work. For Modell, this metaphoric capacity is unique to the human mind and defines imagination: the projection of our bodily experiences onto the world, i.e., the construction of meaning based on our affectively motivated actions.

There are two problems I have with Modell’s presentation. First, I believe that Lakoff and Johnson consider metaphorical conceptualization a basic cognitive process of categorization based on bodily experience and characteristic of all animal cognition. Second, limiting imagination and meaning to the realm of cognition
and action, as Modell does, albeit affectively motivated cognition and action, is exactly the limit Langer is superseding in the case of human mentality. Langer transforms the embodied human mind in a way that Lakoff and Johnson do not appreciate, nor does Modell. Once again, these theorists of mind do not understand the real role of imagination in human thought. It is by allowing us not to act that human imagination engenders the pursuit of meaning and the flowering of human expression.

The philosopher Rorty (1989) posits mind as the ironic use of language to appropriate the contingencies of our lives, thereby creating ourselves in imagination. This is the full projection of Langer’s understanding of mind as transformation, a product of imagination. While recognizing real internal and external constraints on the creations of our imagination, Rorty is neither as interested nor as able as Langer to actually delineate these constraints, nor to see that our imagination is based on our biological capacity to feel. Rorty does not appreciate that our need to create ourselves beyond the instinctive activities of our practice in the world, our need to find explicit meaning, is a part of our natural evolutionary history. Rorty’s lack of appreciation again underlines the unique importance of Langer’s work to current theories of mind; Langer can combine humanistic and scientific traditions of inquiry heretofore considered incommensurable.

CONCLUSION

As stated at the beginning of this paper, the challenge for psychoanalysis is to understand the human mind as it is transformed by our unique symbolic capacity while maintaining its basis in our presymbolic animal nature. Using the simple but powerful notion of feeling as the center of her theory of mind, Langer develops a framework for integrating these two very different aspects of human mentality. Feeling not only brokers between these two realms of mind; it also bridges the gulf between objectivity and subjectivity. Both objectivity and subjectivity derive from our capacity to feel our own activity, whether we feel it as impact and call it the
objective world, or feel it as responsiveness and call it our subjective selves.

Langer’s development of the concept of feeling provides a compelling framework for pulling together the multiple capacities that are effortlessly combined in the human mind. While students of psychology are told that biological and cultural studies are equally relevant to the study of human behavior, in fact, psychologists seem to experience these domains as isolated, unrelated entities. Only psychoanalysts have awkwardly straddled both domains, as Freud himself did, but even in psychoanalytic theory, the bridge between biology and culture has not been clear. Langer articulates the seamless integration of biology and culture, based on the unity of her single theater of felt activity. For Langer, our bodies enable us to feel, and our feelings enable us to create our distinctly human minds.

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