

## The pragmatics of meaning

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The traditional targets of scientific inquiry are available to sensory analysis, localized in time and space, and simultaneously accessible to the individual experience of multiple observers (at least under carefully controlled conditions). Meaning, which can vary dramatically between observers, does not reveal itself in any such straightforward manner. It is therefore not clear that it can be addressed scientifically, even in principle. At least this is the classical argument. But what if meaning could be construed as a stable emergent consequence of the interaction of subjects, objects, elements or situations, conceived of from a more abstract point of reference than that commonly utilized? What if it were possible to say that individual “A” will necessarily experience meaning under higher-order circumstance “B,” and to define higher-order circumstance “B” not as something like an object, but as something like a constant relationship between variable constituent elements – or even a patterned, dynamic relationship between variable constituent elements? Wittgenstein (1968) said that an object is nameable, while a situation – something defined by the relationship between objects – is not. However, the simple act of naming does not exhaust the repertoire of representation. We can act things out, and tell stories, as well as name. Perhaps it is the case that the nature of higher-order “objects” such as meaning cannot be specified without engaging in higher-order representational strategies.

To describe meaning as a complex but potentially specifiable form of emergent property seems one step in the process that might turn it into something scientifically comprehensible. Further steps cannot be taken, in my opinion, without utilizing new frames of reference and methods of verification (or, more accurately, without utilizing the novel juxtaposition of multiple old frames and methods). I will therefore adopt a perspective that is simultaneously phenomenological, pragmatic, existential, idealistic, Darwinian, and narrative. It is phenomenological because it is concerned with the totality of experience, which includes qualia, as well as real-world objects. It is pragmatic because it gives precedence to action and its functional consequences, instead of representation. It is existential because it relies on definitions of truth manifested in action, and then tested by the consequences of such action, using standards that are motivational or emotional rather than rational or objective. It is idealistic because it assumes that the very notion of object or even of matter is not truly sustainable in the absence of the delimited and specifically embodied perspective brought to “reality” by the subjective observer. It is Darwinian because it presupposes that the purpose of representational capacity is not representation as such (and certainly not “objective representation”) but representation in the service of biologically-determined ends. It is narrative, finally, because narrative constitutes a higher-order form of naming, encapsulating the nature of predictably but dynamically transforming relationships between variable constituent elements (as the

“same story” may be told about “different characters”).

I will appeal to two integrally related principles of verification, with regards to the validity of this perspective, that remain somewhat foreign to psychological discussion, which tends towards exclusive focus on “testability.” The first might be considered demonstration of veridicality through consilience, following Wilson (1998); the second, demonstration of veridicality through algorithmic simplicity (a combination of elegance and pragmatic utility) (Norretranders, 1998). The first form of verification is predicated on the idea that theories may be judged by their capacity to provide an account of a phenomenon that is internally consistent at more than one level of analysis (that level being defined by degree of sensory or conceptual resolution, by methodology, or by pattern of historical development). An appeal to probability lurks in this idea of consilience, although it is not something easily quantified. It is difficult enough to produce a coherent account of a phenomenon at one level – say, the biological (and the more pieces of evidence used to generate such an account, the more unlikely its coherence becomes). The probability of producing a coherent account that is applicable at two levels simultaneously has to be the product of the probability of producing such an account at each single level. This means that explanations truly consistent across multiple levels are extremely unlikely, and should be regarded with at least the same respect that accrues to statistically significant experimental results.

The second form of verification is predicated on the notion that a theory that provides a compressed account of a given phenomena is to be preferred over one that provides a complex account. This is a variant of Occam’s razor, but is more explicitly defined: a good theory contains less redundant information than a bad one. It is therefore more efficient – more easily applied and remembered. A good theory therefore states: “these apparently varied phenomena may be considered members of the following single class (at least under particular specified circumstances).” Then the class itself may be utilized and remembered, instead of each individual element. It appears to be a combination of consilience and algorithmic simplicity that underlies the sense of “understanding” produced by a good theory: when a simple solution to a complex problem can be applied, and engenders precisely the results desired, then the problem has been understood.

I should state, finally, that I do not wish to abandon testability as a criterion for validity. The theory of meaning which I propose has many testable implications – it implies, for example, that self-deceptive individuals will manifest excessive aggression when defending their social identity, and that mental health and the courage to explore are synonymous concepts (Peterson, 1999a; 1999b). I just wish to point out that other perfectly reasonable, necessary and appropriate criteria exist, and to suggest that thought is unjustifiably and irrationally constrained, if immediate testability is regarded as the sole hallmark of acceptable theorizing. Acceptance of such a criteria would mean that thought was never allowed to transcend the bounds of current experimental methodology. There is little doubt that the sterility of much of modern psychological thinking is precisely a consequence of this form of unreasonably bounded thinking.

### Introduction: Meaning as a Constant Solution to the Dynamically Emergent Problems of Being

The world is too complex to be represented and acted upon without radical functional simplification

(Brooks, 1991a, 1991b; Gigerenzer & Goldstein, 1996; Hacking, 1999; Medin & Aguilar, 1999; Simon, 1956). It is meaning that allows for such simplification – and more: it is meaning that ensures that such simplification does not transform itself into inflexible and dangerous stasis. Meaning is a very complex phenomenon, however, even when provisionally defined “as an aid to simplification.” It therefore appears conceptually useful to consider the manifestation of meaning in three broad classes. The first class constitutes the mechanism for the establishment, monitoring and organization of the most basic and universal forms of functional simplifications, commonly regarded as motivations. This class may be regarded as meanings of the determinate world. It includes meanings of emotion, role and social identity, as well as motivation. The second class of meaning constitutes the mechanism for the identification and exploration of those aspects of the environment that constantly arise to challenge the integrity of current functional simplifications or determinate worlds. This class may be regarded as meanings of the indeterminate world, and includes the meanings of anomaly or novelty. The third class of meanings constitutes the mechanism for establishing and representing the integrated interaction of the first two classes. This class may be regarded as meanings of the conjunction between the determinate and indeterminate world. It includes the meanings that arise in the course of exploratory behavior and in the ritualization and representation of such behavior. Consideration of all three classes of meaning provides a portrait of the phenomenon at hand that is simultaneously comprehensive and differentiated.

### Class 1: Meanings of the determinate world

Introduction: Motivation does not drive behavior, in a deterministic manner; nor does it simply set goals. A state of motivation is instead something more akin to an axiom, or a predicate of experience; something that provides a delimited or determinate frame for action, perception, cognition and emotion (for a similar idea in the cognitive domain, see Barsalou, 1983). This means that a given state of motivation is something that gives the current state of being boundaries and values (which will remain unquestioned as long as the action patterns currently undertaken produce their desired and expected ends). These bounded states of being can usefully be regarded as determinate micro-“worlds” of experience.

Such motivation-predicated determinate worlds are manifold in number (as there are qualitatively different forms of motivation – see Rolls, 1999), and exist sequentially (as action, perception, cognition and emotion must be specifically targeted, not least because of the extreme limits that characterize conscious human information-processing) (Miller, 1956; Cowan, in press). Many determinate worlds exist, each dominated by a given motivational state, each containing particular, specified conceptualizations of the current state and desired end, which serve as necessary contrast and target points for the extraction of percepts, the specification of objects of abstract thought, the selection of motor procedures, and the affect-laden evaluation of ongoing world-events.

Currently functional determinate motivation-worlds are productive and predictable, composed as they are by definition of previously encountered and familiar phenomena. The objects encountered in such a world, the thoughts that are likely to occur there, the emotions experienced, are all bounded, if not precisely specified (Peterson, 1999a). This makes determinate worlds secure. They may therefore be regarded, “symbolically,” as something metaphorically and functionally equivalent to a maternal embrace; alternatively, they may be portrayed as a social or patriarchal microcosm.

Motivation as the first-order solution to the problems of complexity, self-maintenance and self-propagation: We must survive and propagate, in a world whose complexity exceeds our representational and functional capacity. Motivation serves to initially address these problems. A given determinate world is engendered as a consequence of emergent insufficiency, along a given motivational dimension. A food-deprived animal therefore increasingly exists in a world where hunger constitutes the undesirable beginning-state, where the presence of food constitutes the desired end-state, and where objects are perceived and responded to solely as they are relevant to the hunger-world (see Gray, 1982; Rolls, 1999; Panksepp, 1998). The motivational significance of beginning-and-end states appears as something primarily given by biology, or as something secondarily and rapidly derived from biology through learning. What “given by biology” means is that we confront the environment with the tendency to engender certain limited worlds or, alternatively put, with the tendency to manifest certain values. This tendency appears innate and evolutionary ancient, as we do not appear to learn loneliness, playfulness, hunger, thirst, or sexual yearning (Panksepp, 1999) or even the desire for a good story (as these seem more to constitute the very preconditions of learning). What “derived from biology through learning” means, by contrast, is that deprivation may directly engender meaningful beginning and end-states, while conditioning may replace such directly-invoked beginning and end-states with functionally isomorphic equivalents. Furthermore, inference may replace conditioning, as motivation becomes increasingly abstracted. A rat will work to turn on a light previously paired with food; a human being may be conditioned, similarly, but will also work spontaneously to increase wealth, because he or she understands that money can be used to buy food (and not only to buy food, or to attract sexual partners, or to ensure comfort, but to engender states of being where the pressure of motivation per se may become something properly managed and delightful, rather than something burdensome and oppressive).

The primary state of motivated affairs is represented in [Figure 1](#), which schematically portrays the first variant of class 1 meaning. [Figure 1](#) presents the blueprint of a simple determinate world (one erected on the foundation of sexual desire, for the purposes of illustration), which consists firstly of conceptualizations and perceptions relevant to the movement from point a – the undesired beginning-state – to point b – the desired end-state – and secondly of specific motor patterns designed to bring about that movement. [Figure 1](#) also schematically presents the structural elements of the simplest narrative or story (Peterson, 1999a). Such simple stories might be regarded as akin, in the domain of morality or action, to the Kuhnian paradigm, within which “normal science” takes place (Kuhn, 1970). Kuhn was concerned, however, with the construction of scientific theories, concerned with description of the processes and things of the objective world, whereas the “normal story” is something that represents typical processes of goal-specification, categorization, evaluation and action. So the narrative “normal story” might be regarded as something more akin to “normal engineering” than to “normal science.” This normal story is also something like the necessary fiction of Vaihinger (1924) and Adler (Ansbacher & Ansbacher, 1956) or the *Dasein* of the phenomenologists (Binswanger, 1963; Boss, 1963) or the expectancy schema of the behaving animal (Gray, 1982). Individuals operating within the confines of a given “normal story” move from present to future, in a linear track. Two points define such a track – such a *line*. You can’t define your present position, without a point of contrast. Likewise, you can’t evaluate a potential future, except in terms of your present position. [Figure 1](#) therefore portrays the most basic schema for the interpretation and evaluation of events or objects, and for action predicated upon that interpretation and evaluation.

The emergence of a particular motivational state as situationally predominant induces a state of radical world-simplification. A thirsty animal, for example, treats the environment as a place where water might be obtained, or at least sought, through previously learned means. This means that motivation establishes the functional domain for object perception, organization of action and emotional response (Rolls, 1999; Panksepp, 1999). The perception of objects, after all, is complicated by the problem of level of resolution: the dividing line between a situation, an object, and the subcomponents that make up that object is far from simply given (Brooks, 1991a, 1991b). When you wish to travel to work, the object “office” constitutes a reasonable but undifferentiated goal. When you are in the office, however, and wish to place a telephone call, the office then must become functionally differentiated into figure (telephone) and ground (everything else) (see Barsalou, 1983, for a similar line of reasoning). If the telephone fails to work, then its parts in turn become objects (is the line plugged in? is the headset properly attached?). Human beings appear to be low-capacity processors, so to speak, with an apprehension capacity of somewhere between four and seven objects (Cowan, in press; Miller, 1956). So it seems that our working memory works in concert with our motivational systems: a good goal requires consideration of no more things than we can simultaneously and efficiently track. Perhaps it is in this manner that we determine when to deconstruct a task into subgoals – all goals are motivated; all reasonable goals are cognitively, perceptually and behaviorally manageable.

It might finally be pointed out – with regards to the notion of motivation as axiomatic (and, as such, as something “outside” or “underneath” normal experience) – that it is the shared, innate motivational aspect of meaning that makes meaning communicable. We are all at the whim of the same gods, considered as dramatic embodiments of the motivational forces that guide us. When I say “I was very lonesome last week,” a human listener responds “why were you lonesome?”, which is a query about determining circumstances, both objective and subjective, rather than responding “what do you mean, ‘lonesome’?” What we will is subject to biological constraint: the ends we choose must meet the ends that support our being, or our experience will transform itself into suffering, or cease altogether. Those ends may be varied in complex and interesting ways, but they remain universally comprehensible: we can understand others because they are destined to address the same problems that beset us. Another individual may derive different solutions, as a consequence of personal or traditional identity, but his or her biological imperatives and emotional responses remain universal. As individual solutions move away from those offered by basic motivation and emotion, individuals become differentiated from one another – but never abstracted to the point of incomprehensibility from the shared and valenced ground of phenomenological reality. This means that it is the fact of shared meaning at the motivational level that puts a halt to the infinite regress that would otherwise always lurk as an unavoidable pitfall in a communicative statement; means as well that is the fact of shared meaning that constitutes a veritable precondition for communication.

Emotion as a solution to the problem of motivation: Motivation may be construed as a set of solutions to the base-level problems of human existence. Unfortunately, solutions to problems frequently generate their own second-order problems. The solutions of motivation offer no exception. The construction of a simplified perception, cognition and action-world as a consequence of the emergence of a motivated state helps determine what ends action should pursue, and what objects should be observed in that pursuit (or,

more accurately, helps determine what concatenation of phenomena should be even considered as objects) (see Wittgenstein, 1968; Lakoff, 1987; Tranel, Logan, Frank & Damasio, 1997; Hacking, 1999). Action implies trajectory, however, and movement along a trajectory means the action-dependent transformation of the environment – as the absolute point of action is to produce desired transformations of the environment. The changes produced in the environment as a consequence of goal-directed maneuvering necessarily have implications for the attainment of the goal – but not only the implications expected or desired. It is the evaluation of such complex and potentially troublesome implication that constitutes the function of emotion. Emotion might therefore be regarded as a process devoted towards the real-time maintenance of motivation-simplified worlds; might be regarded as a marker indicating whether the journey to a motivationally-relevant target is proceeding properly or improperly (see Oatley & Johnson-Laird, 1987; Oatley, 1999).

[Figure 2](#) provides a schematic representation of the real-time evaluative role played by emotions. Emotional relevance appears as something essentially two-dimensional, in such a schema, in contrast to the multiple dimensions of motivation. This two-dimensional structure manifests itself because events that occur within motivation-worlds have the essential nature of affordances (following Gibson, 1977) or obstacles. Affordances are phenomena which can be utilized to increase the likelihood that an end-state might be reached, or to decrease the time-interval until that end-state's manifestation. Obstacles have the reverse nature. Affordances and obstacles can be abstract, as well as concrete. An abstract affordance might be regarded as a mere cue that a desired or meaningful end-state is likely to manifest itself, in the expected and desired manner – the hint of a smile, for example, from a desired individual – while an abstract obstacle is a cue that something has gone wrong. Affordances or their abstract equivalents are positively valenced – the first dimension of emotion – as they indicate that progress is occurring, and that the structural integrity of the motivation-world currently operative may be considered intact. The appearance of appropriate, expected and desired affordances and their abstracted equivalents is therefore something experienced as self-verifying (at least with regards to the delimited aspect of the self currently serving as a motivation world). Obstacles or their abstract equivalents are, by contrast, negatively valenced (the second emotional dimension), as they indicate at least that progress has been halted or is in danger – and, more importantly, suggest that the current motivation-world may not be functional. The appearance of an obstacle is therefore something experienced, in general, as self-refuting.

The magnitude of emotional response is something usefully considered, in addition to the kinds of emotional response. Such magnitude appears dependent on the interaction of four complex phenomena. First is the believability or perceived validity of experience. The nature of a phenomenon – affordance, obstacle, or ground – is frequently not simply given. Is the appearance of an affordance or obstacle something real, or merely something apparent – something to be taken into account, or ignored? The perceived reality of a given event is dependent upon many factors, including the elegance, internal consistency and simplicity of the current explanation or categorization, the comprehensibility and repeatability of the event, and the integrity or status of the source (in the case, say, of abstract information concerning the nature of things, derived from another individual). Regardless: more believable occurrences have more impact, all things considered, than less believable occurrences, which can be discounted. Second is the size of the space-time area covered by the motivation-world currently in operation. The disruption of a plan with a duration of a year is more disconcerting than the disruption of a

plan for the day. It is much worse to fail medical school than to fail a single examination. This is because the failure of large-scale plan produces more revelation of emotion-and-motivation-disinhibiting complexity (as larger pieces of the unrevealed world are more complex than smaller) (Norretranders, 1999). The simple observation of magnitude/size relations is complicated, however, by the third phenomena, the effect of contrast: the more polarity that exists between a given beginning-and-end point, the more emotionally significant the appearance of a given affordance or an obstacle. Fourthly, finally, is the notion of level of implication (which is, however, integrally related to space-time area): it is more disruptive to encounter an obstacle that invalidates a motivation-world, as such, than it is to encounter an obstacle that merely requires the switching of means. This means that emotional significance may be usefully considered in its within and between-world variant forms (Peterson, 1999a). This is an observation with important implications for the meanings of identity, considered next.

Identity as a solution to the problems of motivation and emotion: I am capable of abstraction, and second-order representation, so I know that I will desire companionship, and shelter, and sustenance, and aesthetic and exploratory engagement, so I conjure up a delimited world where I can work to obtain tokens that may be exchanged for such things. The pursuit of those tokens then becomes something meaningful. And I conjure up and engage in such an abstracted, delimited space to keep my basic motivational states under voluntary regulation, and act carefully so that I am not dominated by negative emotion, as a consequence of carelessness. And so one might say that a third form of determinate-world meaning can be identified – one that is much closer to abstract conceptualization and to social being than to basic motivation or emotion. I experience my immersion in any and all determinate worlds as meaningful. I have a stake in their maintenance, as such, regardless of their particular content. Furthermore, I become emotionally attached to them – I identify with them. Such worlds are difficult to construct, and therefore valuable. They simplify the world, and hold its complexity in check. Finally, they suit my needs, and regulate my emotions. So personal identity is in the most simple form the acceptance of a given motivation-world as an aspect of the self.

More complexly, however, identity constitutes a solution to the problem of organization posed by the diverse motivational (and emotional) aspects of lower-order meaning. First is the issue of sequencing: in what order should given motivational worlds be allowed to manifest themselves, in the course of a given day, or week, or longer span of time? Second is the closely related issue of hierarchical import: what motivational world or worlds should be granted priority? When I am faced with a conflict between affiliation and productivity, for example, which do I choose? How do I rank-order my motivations, my values? My personal identity is therefore integrally determined not only by my own motivations and emotions, and my decisions with regards to their order and import, but by the fact that all others are making identical decisions, and that the environment in which those decisions are manifested is shared. So I must come to terms with the other. That means that personal identity shades into the social; means that personal and social identity is the emergent and even “unconscious” – that is, automatic and unplanned – consequence of the co-operative/competitive sequencing and rank-ordering of motivational states. So the third form of determinate-world meaning tends towards identity in the personal guise and ideology in the social, as specific modes of “being” – roles, to speak sociologically – are integrated under the rubric of general ritual and religious or philosophical conception, at levels of order that transcend the individual (Peterson, 1999a).

[Figure 3](#) schematically portrays a representation of identity, which organizes motivational and emotional states (or which constitutes that organization). At the highest level of resolution, identity consists of the motor patterns that constitute a given behavior (“write sentence,” in the current example) and the perceptions, cognitions and emotions that are relevant to that behavior. At lower levels of resolution (or higher levels of abstraction), behaviors are organized into functional and theoretically homogeneous groupings, which may reasonably be considered classes. High-resolution levels of behavioral operation constitute sub-elements of low-resolution conceptualizations (Powers, 1973; Carver & Scheier, 1998) and are governed (that is, sequenced, hierarchically rank-ordered, and evaluated) in consequence of their relevance as affordances, obstacles or irrelevances, construed in relation to those lower-resolution conceptualizations. So I write a sentence, and attend to the specific topic of that sentence while doing so. Then I decide where that sentence should be placed, calculate its comparative importance, and evaluate it for quality – but I do this by switching to the the lower-resolution determinate world “author manuscript,” and using that world as the frame for my decisions. In turn, I consider “authoring manuscripts” as a subelement of the determinate world “practice science,” and so on, up the hierarchy of abstraction from the purely personal to the shared social (Peterson, 1999a).

## Class 2: Meanings of the indeterminate world

Anomaly as a consequence of the insufficiency of determinate motivation-worlds: Now the problem with personal identity or social role is the problem of the dead past. The environment is entropic, while tradition, whether personal or social, is static (hence “the state”). Anomaly may, in consequence, be precisely defined as the eradication of the static by the entropic. What this means is that the hierarchically-arranged functional simplifications or motivation-worlds generated by the cumulative motivated cognitive activity of those who inhabited the past (and that past may even be the yesterday of the single currently aware individual) may come to be revealed as inadequate, in some important manner, because of the dynamic transformations that constitute the present. This might be regarded as the problem of *constraint by the world*: the problem not of matter, but of what matters; the problem not of the object, but of what objects (see Norretranders, 1998). The environment is far too complex for me to understand, yet I must act on it. So I simplify it, in a functional manner – partly by relying on the traditions generated by others – but its complexity still emerges, when I least expect it. Such emergent complexity or anomaly may manifest itself, for example, as the ineradicable possibility of environmental transformation, cross-cultural contact, technological construction, or radical interpersonal communication, in the third-person or objective domain, or as revolutionary ideation in the first-person or subjective (Peterson, 1999a). Therefore, although motivation, emotion and personal or ideological identity may effectively provide solutions to particular problems over delimited times and spaces, these forms of meaning cannot provide a final solution to the problem of the emergent complexity of the world, and cannot therefore be experienced as satisfying, in any final and important sense. And this means that tradition can never provide enough meaning. This is true regardless of the content of that tradition (lawyer vs doctor, say, or Muslim vs Jew), and regardless of its existence as personal role or social identity. Hence the necessarily deadening, restricting and totalitarian aspect of belief (Peterson, 1999b) (and this is not to say, stupidly, that belief is therefore unnecessary or without value or meaning).

Meaning therefore means the significance of our delimited motivation-worlds (our specified beginning and end points), the implication of the events that occur during the enaction of those worlds, and the hierarchically-arranged patterns of conceptualization and action that we use to organize motivation and emotion psychologically and socially. And this explication is relatively comprehensive, but still fails to deal with a complex class of meaningful phenomena, whose central nature is more closely associated than any other with meaning *as such* (considered aesthetically, spiritually or philosophically). Determinate positive and negative events may occur, as the world unfolds in the course of meaningful goal-directed activity. Irrelevant things occur, too, of course – but are in some important sense never realized (as you do not and cannot pay attention to all activity, but only to all relevant activity). But what of anomalous events? Some occurrences are neither evidently good or bad – nor immediately eradicable as meaningless. These are generally occurrences that are *not* understood, *not* explored – that cannot be placed into the context of the current motivational-world (nor perhaps in any other conceivable alternate motivation-world). What is to be done in such cases? What is not comprehended but is still undeniably extant must logically be experienced as paradoxical (Jung, 1967, 1968; Gray, 1982; Peterson, 1999a): negative, in potential, and positive, in potential, and irrelevant, in potential (and self and world in potential, as well). And there is something even deeper and more mysterious about the anomalous event. At some point in cognitive, emotional and perceptual development, however hypothetically localized that point must be, *all events* are anomalous. And that implies that the construction of forms of reference that allow for the determinate classification and utilization of objects, situations and abstractions is something dependent on the extraction of information from the overarching and ever-emerging domain of the anomalous or novel. And it is for all these reasons that the anomalous or novel should be regarded as meaningful, *a priori* – and for all these reasons that the meaningful anomaly might well be regarded as the ground of determinate being itself.

[Figure 4a](#) and 4b schematically portray class 2 meaning, associated with the emergence of world-complexity or anomaly, of the within and between motivation-world types. [Figure 4a](#) portrays the affective and pragmatic consequences of emergent anomaly, rapidly adjudicated as non-revolutionary. This means the encounter with something unexpected, in the course of goal-directed activity, within the context of a given motivation world. An anomalous occurrence is not initially an object (an affordance or obstacle). It is, instead, the re-emergence of ignored ground, which first produces a relatively undifferentiated state of affect, weighted in most cases towards the negative (as caution is an intelligent default response to evidence of error (Dollard & Miller, 1950)). A within-determinate world anomaly is merely something that can be circumvented, without eradicating the structure of that world. So if you are accustomed to walking down a hallway to an elevator, and can do it, for example, while you read, a carelessly placed chair in the middle of that hallway would constitute within-determinate world anomaly. You can still get to the hallway (so may still exist within the determinate world guiding that activity), but you have to step around the chair. Such emergent anomaly will produce a brief flurry of indiscriminate affect, immediately quelled by classification of the anomaly as misplaced chair, and by subsequent re-establishment of the integrity of the currently operative motivation-world.

[Figure 4a](#) presents the simple (that is, non-revolutionary or non-catastrophic) consequences of “predicted” and “unpredicted” occurrences, attendant upon “planned sequences of adaptive behavior,” in terms of emotion and behavior. If one plan fails, another might be generated (with the beginning and end points

remaining constant). If the second plan fails, yet another may arise, and the nature of the beginning and end points still remaining unchallenged. This is, once again, process within “normal limits.” Insofar as the goals of current behavior remain unchallenged, the means may switch repetitively without undue alarm. If a dozen plans fail to reach a given goal, however, the functional integrity of the determinate world itself becomes questionable. This questioning process may occur because of the emergence of “anxiety” or “frustration” or “disappointment” or “anger” as a consequence of repeated failure. Under such conditions (which is “repetition of error”) it becomes reasonable to rethink the whole plan, the whole story – and that means to reconstrue the current determinate world. Perhaps where you are isn’t as bad as you thought; alternatively, perhaps, another somewhere else might be better. This process of more dramatic error-driven reconsideration and categorical reconstruction is portrayed in [Figure 4b](#) (and later, more comprehensively, in [Figure 5](#)).

[Figure 4b](#) portrays the consequences of anomaly resistant to categorization within the confines of the current determinate motivation-world. This is the situation that arises when a problem that cannot be easily solved makes itself manifest. You are working on a computer, for example, authoring a manuscript, and the computer crashes. The environment can therefore no longer appropriately be conceptualized in terms of writing. This means that a new determinate world, with different beginning-and-end points, must be constructed, to deal with the emergent problem of the malfunctioning computer. Such construction does not occur, however, without cost. The initial determinate world may be regarded as the cognitive-emotional-perceptual structure whose primary function is the functional simplification of the environment. When that simplification is disrupted, then the complexity of the environment re-emerges, however briefly. Imagine that the computer crash turns out to be accompanied by complete hard-drive failure, for example, in the absence of a recent back-up. Re-construal of the environment is thus made substantively difficult. What should be done? What should be felt? What should be perceived? In the interim, before such things are specified, experience consists of a descent into chaos, so to speak, which might be regarded as the place – the no-man’s land – between decisions. This place is ruled by conflicting motivations, as basic regulatory systems strive there to obtain dominance over and bring order to the currently dysregulated world, as emotions compete there to guide behavior (as anger, fear, guilt, hurt – and even exhilaration, if the disrupted motivational-world was ambivalent in value – perhaps you did not want to write that paper, anyway...) and, more complexly, as new information reveals itself there, as a consequence of the eradication of the limitations placed on perception by the now-disrupted determinate motivation-world. Perhaps you learn a valuable lesson, as a consequence of your foolish error: the information that makes such learning possible is in the same “between-decision” domain as the emotional and motivational chaos attendant upon failure (Jung, 1952, 1967, 1968; Peterson, 1999a).

### Class 3: Meanings of the conjunction between the determinate and indeterminate worlds

Orienting and exploration as a solution to the problem of anomaly: We know that things are more complicated than they appear – that is, we know that whatever is is more complicated than whatever is specified by our current motivation-world. We know that we must perform radical simplifications of the world, in order to operate in it. This means that whatever is might be regarded as the sum of all we know, plus all that is left over (all that is not currently being taken into account, perceived, conceptualized or acted upon). This implies that “all that is left over” may constantly present itself as something with the

capacity to “correct” the insufficiencies of our current simplified but theoretically functional stance. Then the question immediately arises: what is the immediate consequence of the emergence of such corrective information? And here might be proposed a radical answer – although not one without its philosophical precursors (Binswanger, 1963; Boss, 1963): it is the direct revelation of meaning. And this all implies that the world as it truly is reveals itself as paradoxical meaning, long before it reveals itself as determinate motivational or emotional significance, or as irrelevance, or even as object or fact (because something is certainly novel long before it becomes a recognizable and stable object; because the construction of fact as currently conceptualized requires the active participation of other people).

It is something delightful to note – and something that is not entirely without irony – that the facts themselves appear in concordance with this functional or pragmatic inversion of materialist reality. Let us take for example the processes that underly a diversely complex range of animated activities – animal, much as human. It is an accepted axiom of theories describing such activity from perspectives ranging from the neo-psychoanalytic (Jung, 1952; Adler, in Ansbacher & Ansbacher, 1956) through the cybernetic (Weiner, 1948) to the behavioral, cognitive (Abramson, psychobiological, narrative and social-psychological (Carver & Scheier, 1999) that human behavior is goal-directed, rather than simply driven. Let us start with an attempt to integrate the relatively modern animal-experimental/behavioral formulations of Jeffrey Gray (1982), Jaak Panksepp (1999) and Edmund Rolls (1999) and work from there. These modern behaviorists speak the language of stimulus and reinforcement. While this might strike some as anachronistic, it has one striking advantage. Its terms are defined. When a behaviorist refers to broadly positive motivational or affective states, for example, he says “consummatory” or “incentive reward.” Consummatory reward means occurrences (1) whose appearance will produce an increase in the future likelihood of immediately preceding behaviors, (2) whose functional effects appear modulated at least in part by serotonergic mechanisms, and (3) whose appearance will bring the current state of goal-directed behavior and conceptualization (that is, the current motivational-world) to a halt. Incentive reward means occurrences (1) that signal consummatory reward (affordances, using the terminology previously applied), (2) whose application will also produce an increase in the future likelihood of immediately preceding behaviors, and (3) whose effects can be modulated as a consequence of the administration of dopaminergic agonists and antagonists. When such a behaviorist refers to broadly negative motivational or affective states, for example, he says “punishment” or “threat.” Punishment means an occurrence (1) whose application will produce a reduction in the future likelihood of immediately preceding behaviors, (2) whose application will produce angry, aggressive or flight-oriented responses, and (3) whose behavioral and psychophysical consequences can be modulated with the administration of opiate agonists or antagonists. Threat means occurrences (1) that signal punishment, (2) whose application will also produce a reduction in the future likelihood of immediately preceding behaviors and (3) whose consequences can be modulated with the administration of “anti-anxiety” agents such as the benzodiazepines and barbiturates.

Why is this relevant? Well, this careful definition of terms is particular useful in a discussion of meaning, as meaning in its most basic guises means implication for behavior – or, at a higher level of abstraction, implication for the conceptual schemes that currently govern behavior. So consummatory and incentive reward have meaning – “repeat in the future the behavior(s) that you just manifested in the past” or “continue on the same (potentially) productive path,” experienced as affect or motivational state. That

affect or state is somnolent pleasure and the momentary lessening of general motivation, in the case of consummatory reward, and hope and curiosity, excitement, engagement, and interest in the case of incentive reward. Punishment and threat have meaning, as well, in the opposite sense – “do not manifest in the future the behavior(s) that you just manifested in the past” or “discontinue movement on this counterproductive trajectory,” experienced, as well, as affect or motivational state: hurt (disappointment, frustration, pain, grief, agony), in the case of punishment; anxiety (fear, worry, concern), in the case of threat. And it should be stressed, that such meaning is not only relevant for behavior – for particular motor-patterns – but for entire determinate worlds. Such worlds are supported (“reinforced”) by their success, and eradicated or at least threatened by their failure – even when that success or failure is something only imagined (and this constitutes much of thinking).

But what of anomaly? One sets up a meaningful (motivated) goal-directed schema, to specify the objects of apprehension and the motor-programs matched to those objects and to the attainment of the goal. This schema is a little story, a mundane little story – a story whose meaning can be inferred and imitated by others. A goal-relevant world of experienceable simplification emerges, perceptually, accompanied by procedures known to be effective in that world. And virtually everything irrelevant to that domain of concern – which is virtually everything, in the case of a good plan – is ignored. And when the plan is a good plan – when the simplifications (think concept) and motor operations that make it up are functional – then the desired end is obtained, but nothing is learned. And it is because things are learned only when desired ends are not obtained that error serves as the mother of all things.

The appearance of the informative anomalous produces its own bounded motivation-world, manifested as the orienting reflex or complex (Gray, 1982; Halgren, 1992; Halgren, Squires, Wilson, Rohrbaugh, Babb & Crandell, 1980; Ohman, 1979, 1987; Sokolov, 1969; Vinogradova, 1961, 1975), with the beginning point of that world constituting the insufficiency of present knowledge, and the desired end point the functional classification of the presently anomalous emergent phenomenon. The anomalous unknown draws attention to itself, as a consequence of the actions of involuntary motivational and emotional systems, so that increased intensity of sensory processing and increased motoric and abstract exploratory activity (in the form of cautious approach; in the form of re-consideration of extant cognitive and perceptual categories) may be brought to bear on the locus of revealed complexity. This sensory processing, cautious approach, and re-consideration means examination of the anomalous from the perspective of various motivation-worlds (is the new thing relevant to some specified motivational domain?) and from various emotional perspectives (may it serve as an affordance, or its abstracted equivalent? Is it an obstacle, or a cue for an obstacle? Can it be regarded as occupying the same categorical domain as other previously classified and irrelevant “objects” – so, may it reasonably be regarded as ground)? This classification, consequent to exploration, constitutes the elimination of motivational and emotional possibility from the anomalous – constitutes the constraint of meaning from the infinite and indeterminate (in the extreme and limiting case) to the finite and determinate (Peterson, 1999a).

Meta-identity as a solution to the problem of identity: Meanings of identity are solutions to the problems that emerge as a consequence of operation within the determinate worlds of motivation and emotion. It is individual roles and beliefs, merged into social identities – merged through ritual or ideological means –

that regulate the intrinsic meanings of life, bringing psychological and social order to the intrinsically-conflict laden chaos of need and want. All police officers, to take an example of role, share the morality and world-view of the police. All communists, to take the case of ideology, share the morality and world-view of communism. This means that policemen can understand one another, can mutually regulate their motivation, emotion and behavior, when they occupy the same territory. The same can be said, more or less, of communists. All such determinate solutions, however – all roles and ideologies, no matter their level of abstract sophistication – suffer from same perplexing problem: vulnerability to emergent complexity. So we gerrymander specific and particular solutions, in the manner of engineers, but these are never and can never be complete. And this means that there must by necessity be a third class of meaning. It is this third class that provides the solution to the meta-problem of emergent complexity. This third class of meaning manifests itself directly in two particular situations, and indirectly as a form of meta-narrative and meta-identity, when its situation-specific processes attain explicit abstracted representation and embodiment.

The first particular situation of meanings of the third class arises when a goal-directed schema has been rendered invalid, by its own definitions of validity, as a consequence of the emergence of some troublesome anomaly. That anomaly manifests itself initially in the guise of a war of emotions – emotions which, following Dollard and Miller (1950), are primarily negative, for defensive reasons, in the immediate aftermath of task failure. But anomaly does not only signify failure – equally, it signifies possibility, as the manifestation of the previously unrevealed complexity of the world. This complexity may be harnessed, in principle; may be transformed into affordance as a consequence of exploratory behavior and analysis; may be utilized to reconstruct failed determinate worlds, as a consequence of the information released in such exploration. Such acts of harnessing emergent possibility are meaningful.

The second particular situation of meanings of the third class arises in the case of full satiation – in the case where all primary-level states of motivation have met their consummatory destiny, and have therefore ceased to strive for the control of goal, representation, emotion, cognition and action. This second situation arises because the meta-problem of the possible problem still lurks when full satiation has been reached – and because exploration and subsequent generation of information constitutes the only possible solution to that meta-problem. The immersion in such exploration, undertaken for no more necessity than that motivating playful curiosity and fantasy, also constitutes an encounter with meaning.

The meaning that emerges in these situations might be regarded as something analogous to that obtaining when primary motivation is guiding the construction of a determinate world – although the need being addressed is something more abstract, and less immediate (as the utility of information is less concrete than the utility of food). The determinate world that emerges to guide curiosity has as its end-point the potential, or possibility, or promise of the unknown, which has more the nature of an incentive (Gray, 1982), than a classic consummatory reward (as promise is a cue for consummation, and not an object of consummatory behavior). So it might be said that the exploratory spirit is something under the control of incentive, serving a consummatory function. This is in keeping with the more abstract need of curiosity. Now, just as the meaning that creates the determinate world guiding exploration is more abstract than the meaning that constitutes primary motivation, so the identity that incorporates the exploratory spirit is more abstract than the identity organizing base-level motivation. This brings us back to the idea of the

indirect meaning of meta-narrative – and meta-identity.

The simplest story is image-laden description of a base-level motivation world: I was here, and that was insufficient, so I went there. Description of the vicissitudes encountered in the course of such a journey add interest to the basic plot – and the capacity for identification is so strong among human beings that even the abstracted description of such a simple story can provoke strong emotion in the listener, who acts as if immersed in the abstracted, verbally presented fictional world (Oatley & Johnson-Laird, 1987; Oatley, 1999). But the more complex and fascinating story is a meta-narrative – a story that describes the process that transforms stories (Jung, 1952; Neumann, 1954; Peterson, 1999a). And it is identification with this process of story-transformation that constitutes meta-identity, which is personal and social identity predicated upon recognition that the human spirit constructs, destroys and rejuvenates its worlds, as well as merely inhabiting them. Such identification constitutes the most fully-developed revelation of class three meaning.

[Figure 5](#) portrays the process of voluntary determinate motivation-world eradication and exploration-predicated reconstruction. This transformative process is both perilous, and enriching. It is perilous because the descent into the motivational and emotional chaos extant between determinant worlds is stressful, to say the least – as a consequence of the veridical danger and uncertainty of anomaly. It is enriching because unexplored anomaly contains information whose incorporation may increase the functional utility of one or more determinate worlds. This makes the process of the transformation of determinate worlds a “meta-solution” (a solution to the problem of problems). It appears, at least in principle, that this meta-solution constitutes the capstone of emergent meaning – perhaps a final capstone, beyond which no further emergence of solution is necessary. The structure of this solution has to this day remained essentially implicit in mythology, as abstracted and compelling drama, and may be acted out usefully and productively in the absence of explicit understanding. Its implicit existence is merely the consequence of the abstraction of the imitated ideal – that is, the consequence of admiring, and distilling the reasons for admiration, and portraying those reasons in ever-more potent ritual and literary forms, in a process of highly functional fantasy, spanning generations (Peterson, 1999a).

[Figure 5](#) has the structure identified by multiple observers as fundamentally central to complex narrative: *steady state, breach, crisis, redress* (Bruner, 1986; Jung, 1952; Eliade, 1965) or even, dare it be said, *paradise, encounter with chaos, fall and redemption* (Peterson, 1999a). It is of great interest to note that this third class of meaning is essentially religious in its essential phenomenology, and dramatic or narrative in its means of cultural representation. The phenomenology of direct religious experience appears equivalent to immersion in the meaning inspired by engagement in exploratory activity – has been described by Rudolf Otto (1958), for example, as a paradoxical combination of *mysterium fascinans* and *mysterium tremendum*, which is awe and terror in the face of the absolute unknown. The dramatic or narrative representation of this process, presented “unconsciously” as an aid to mimicry, appears to take the form of hero mythology, which is in its essence the abstracted portrayal of the process of courageous approach to anomaly, investigation of its properties, functional categorization and recategorization as a consequence of that investigation, and subsequent communication of such categorization to the social world. Although such dramatic representation is abstract, and may well be regarded as explicit, it is not entirely explicit (existing still more at the level of image or of episodic memory, rather than of word or

semantic memory), and has remained primarily embedded in mythology and literature. We are motivated, and know we are motivated – so we can represent and abstractly understand the state of motivation, and the cognitive, perceptual, physiological and behavioral accompaniments of such states. Likewise, we are emotional, and know we are emotional – so can represent and abstractly understand the state of emotion, and its diverse accompaniments. However, although we are also capable of responding to novelty, and although we use this capacity to solve the problems that emerge from motivation and emotion and their accompaniments, we do not explicitly understand the nature of this response, or its central place in our adaptive striving. It is a remarkable and telling fact, however, that such understanding has nonetheless emerged in an implicit fashion, and is headed up the hierarchy of representation to truly explicit knowledge (Peterson, 1999a). And here we will take a detour into grounds that are richly meaningful in the “third-class” sense, and which provide a psychological interpretation for phenomena that have as of yet remained opaque to the searching eye of science.

If a phenomenon is truly universal, it might be expected to pick up abstracted representation over time, just as the constituent elements of personality appear to have become encapsulated in the languages of the world (Goldberg, 1992). But the processes that make up class three meaning are complex and dynamic – more like “procedures” or “contexts” or “situations” than like things – and they cannot be easily named. So they have not precisely garnered lexical representation. It appears, instead, that they have been represented dramatically, as characters, immersed in plots, and that such representations constitute the most basic, fundamental, and universally distributed ritual, mythological and narrative themes (Peterson, 1999a). The basic character is the hero, as we have said; the basic plot, his confrontation with the unknown, and the subsequent creation or reconstitution of the ever-threatened determinate world of experience. What this means is this: the creator of culture – that is, of the personal and social identity that regulates object perception, abstract thinking, motivation and emotion – is the individual who voluntarily faces the unknown, carves it into useful categories, and redeems himself and the world by doing so.

The ancient Sumerian arch-deity Marduk, for example, voluntarily faces Tiamat, the abysmal monster of chaos, and creates “ingenious things” in consequence (Heidel, 1965, p. 58, Tablet 7:112-7:115)). Marduk serves as exemplar for the Sumerian emperor, as model for the Babylonian conception of sovereignty (ca. 2000 B.C.) and as primal archetype of the active Western style of adaptation. The courageous and creative capacity he embodies or incarnates was also regarded by the Sumerians at the very dawn of history as the process upon which functional reconstruction of traditional categories and habits also rested (Peterson, 1999a; 1999b): Marduk, in his manifestation as *Namtillaku*, is “the god who restores to life” (Heidel, 1965, p. 52, Tablet 6:151) – who restores all “ruined gods, as though they were his own creation; The lord who by holy incantation restore[s] the dead gods to life” (Heidel, 1965, p. 53, Tablet 6:152-6:153). He is *Namshub*, as well, “the bright god who brightens our way” (Heidel, 1965, p. 53, Tablet 6:155-6:156) – which assimilates him to the sun (illumination, enlightenment) and to the eternal triumph over darkness – and *Asaru*, the god of resurrection, who “causes the green herb to spring up” (Heidel, 1965, p. 53, Tablet 7:1-2). Whatever Marduk represents is also considered central to creation of rich abundance (Heidel, 1965, p. 54, 7:21), mercy (Heidel, 1965, p. 55, Tablet 7:30), justice (Heidel, 1965, p. 55, 7:39), familial love (Heidel, 1965, p. 57, Tablet 7:81), and to individual destiny itself. This means that the Sumerians had already implicitly recognized that particular beneficial modes of being (or particular motivation-worlds) were dependent for their very being on the pattern of action represented by Marduk,

the creative explorer of the unknown (Peterson, 1999a).

In the later period of the great Egyptian dynasties, similar ideas prevailed. The Egyptian Pharaoh was regarded both as the force that continually created truth, justice and order (*ma<sup>c</sup>at*) from chaos, and as the immortal embodiment of Horus, who brought his once-great father, the founder of the traditions of the state, back from the kingdom of the dead (Eliade, 1978a). Such ideas necessarily underly the theology and political psychology of diverse ancient cultures (Peterson, 1999a) – necessarily, as the social balance of motivation-and-emotion worlds drives cultures inexorably to embody and then recognize these dramatic forms. Mircea Eliade states in this regard: “We need only remember the struggle between Re and Apophis, between the Sumerian god Ninurta and Asag, Marduk and Tiamat, the Hittite storm god and the serpent Illuyankas, Zeus and Typhon, the Iranian hero Thraetona and the three-headed dragon Azhi-Dahaka.... In short, it is by the slaying of an ophidian monster – symbol of the virtual, of “chaos,” but also of the autochthonous – that a new cosmic or institutional “situation” comes into existence. A characteristic feature, and one common to all these myths, is the fright or a first defeat of the champion... [for example] Indra, on first seeing Vrtra, runs away as far as possible... sick with fear, and hoping for peace” (Eliade, 1978a, p. 205). The meaning of such characterization, such description of process, should be clear, in the context provided by the current discussion. Similar patterns of narrative ideation underlie religious traditions of diverse origins and times: Jewish (Moses’ exodus from tyranny, his descent through the water into the desert, and his subsequent journey to the “promised land”); Christian (Jonah’s engulfment by the magical whale of the deep, and his return to shore; Adam and Eve’s tempted fall, the profane subsequent existence of mankind, and its eventual redemption by Christ, the “second Adam”); Buddhist (the collapse of Buddha’s protected childhood existence, attendant on his discovery of mortality, and his “rebirth” and illumination); and Taoist (the substance of the world as *yang/order/security/tyranny* and *yin/disorder/possibility/chaos*; the conceptualization of the Way as the path that balances both) (Jung, 1968; Peterson, 1999a). [Figure 5](#), which describes the archetypal processes of the transformation of category and habit, also schematically portrays the death of the childhood personality, its descent to the underworld, and its reconstruction as an adult, dramatized and facilitated by initiatory ritual (Eliade, 1965; 1985); the hero’s voluntary journey from the safety of the community into the lair of the treasure-hoarding dragon, and his return, bearing magical (read: “functional”) riches (Jung, 1952; 1968). It is also a Piagetian stage transition, an epiphany, an awakening, and a paradigmatic revolution, in a somewhat broader sense than that meant by Kuhn (Peterson, 1999a).

The process portrayed in [Figure 5](#) is central to life itself – and what is meant by “central” is something specific: ongoing behavioral and psychological adjustment to the ever-changing demands of the social and natural environment. We err constantly in our attempts to elicit what we desire from what currently presents itself. Furthermore, it appears very likely that even once-productive determinate worlds or normal stories render themselves irrelevant with the mere passing of time, as a consequence of the transformation of subject and object that temporality entropically produces (Eliade, 1978a; Peterson, 1999a). Determinate worlds that may have been perfectly appropriate at one stage of life soon become traps for those who strive to maintain them, past their point of utility: there is something more than faintly ridiculous about the 40-year old man who still maintains the attitudes and habits of an adolescent. However, the fact that the process of determinate-world regeneration appears profoundly necessary does not imply that it is either simple or automatic: the default position is stasis and stagnation – is “the

kingdom, ruled by evil, turned to stone,” from the mythological perspective (Peterson, 1999a). Adjustment takes work. Exploration and reconfiguration takes time and energy.

And something even more unsettling exists on the horizon of change, so to speak: it is determinate that hold the complexity of the environment in check. What does this mean? Simply put, it means that the goal-hierarchy and attendant plans constructed up by a given individual and held as personal identity (Carver and Scheier, 1998) constitutes the structure that keeps the motivational significance of all things specified and stable (Kelly, 1955; Peterson, 1999a). If it is the emergence of a determinate world that reduces the environment simultaneously to seven (plus-or-minus-two) objects (Miller, 1956) and to the great singular class of “all irrelevant things that can therefore be ignored,” (see Lubow, 1989, for a description of the psychobiology of such processes) it must also be the case that the collapse of this world *disrupts the capacity to ignore* – and that, in consequence, all things now considered irrelevant must be reconsidered as potentially important. And it is a very difficult-to-come-to-terms-with fact that “potentially important” in its first stages means capable of inducing negative affect – as all things not understood are clearly of potential danger. It is furthermore the case that the emergence of a given anomaly in the course of a sequence of goal-directed activity not only threatens that sequence and those goals but at least in possibility all sequences and all goals (at least until the anomaly has been explored, and reconciled: that is, until it has been cut down to size, assuming such cutting is possible). So that means that an anomaly is in truth a dragon of indeterminate size, and that one must be somewhat of a hero to admit to its existence and approach it. And in the absence of this heroic identity, the dragon keeps growing, so to speak, as the consequences of unexplored anomaly propagate – until it is truly something big enough to threaten the whole castle (Kent, 1975). So this all means that the world, considered as the normal story, deteriorates “of its own accord,” merely because the conditions of existence transform themselves unpredictably according to their own inner workings – but also means that the actions and inactions of individuals can facilitate or eradicate this deterioration.

Mircea Eliade approached this very issue from a uniquely informative perspective – and one that seems to have great but as of yet unrevealed significance for psychology. He first described the widely disseminated belief that the “world” inexorably ages and decays (1978a), depicting common sequences of rituals designed to “regenerate the cosmos,” and the subsequent mythologized and abstracted narrative portrayal of those rituals. The degenerating “world” that serves as the object of such rituals and narrative representation is clearly not the objective, material place currently regarded by the modern mind as environment. This world is instead the predictable social structure of category and habit erected as a consequence of the cumulative creative endeavours of man, ancestral and present; is the “protective barrier” placed by mankind between the vulnerability of the individual and the destructive forces of nature (Peterson, 1999a). Nature, “ravished by transmutation” (Newton, 1704), is in a constant state of flux: the determinate worlds of the past, “cast in stone,” become merely by their own inertia and dearth of spirit something increasingly mismatched with the current state of affairs. This process of distancing between culture and nature, so to speak, is aided and abetted by the voluntary faults and transgressions of those who exist in the present, as each individual, according to his or her failure of courage, fails to improve things in the face of absolute evidence for their insufficiency (see Solzhenitsyn, 1975, for an extended discussion of this process, in the political and economic spheres). The increasingly unsustainable distance between category and habit and environment resolves itself not infrequently with

catastrophe, as societies restricted in their adaptive capacity by the bonds of the past collapse precipitously (see Sutter, 1996), to rise again – or to disappear entirely. It is for such reasons that narratives of the “destruction of the world” by an angry god or gods are widely disseminated – particularly in the form of the deluge myth, whose existence has been documented on all continents (Eliade, 1978a). The matrix of creation, symbolized by the primordial “element” of water, constantly conspires to destroy those who depart from “the divinely ordained way,” in a manner that is simultaneously inevitable, universal, and highly memorable: “The majority of the flood myths seem in some sense to form part of the cosmic rhythm: the old world, peopled by a fallen humanity, is submerged under the waters, and some time later a new world emerges from the aquatic “chaos.” In a large number of variants, the flood is the result of the sins (or ritual faults) of human beings: sometimes it results simply from the wish of a divine being to put an end to mankind.... the chief causes lie at once in the sins of men and the decrepitude of the world.” (Eliade, 1978a, pp. 62-63).

It is for this reason that formalized, abstracted, traditional religious systems, such as Christianity and Buddhism, lay explicit stress on the necessity for humility, as a precondition for redemption – lay explicit stress, that is, on the necessity for constant and vigilant recognition of self-produced error, as an antidote for dangerously rigid identity: pathological authoritarianism, arrogance and tyrannical attitude (see also Solzhenitsyn, 1975). Such systems of belief additionally stress the vital need for personal courage and integrity in the face of mortal danger and ever-present intrapsychic and interpersonal pressure to conform. Christianity, most explicit in its characterization of good as well as evil goes so far as to directly identify its central hero, Christ, with the *Logos*, with the creative Word of God – that is, with the process that generated order or world from chaos “at the beginning of time” and still serves to maintain that order (Jung, 1952; 1959; 1963; 1967; 1968).

Medieval alchemical thought, serving as a bridge between the extreme spiritualism of European Christianity and the later materialism of science, took to itself the dictum *in sterquiliniis invenitur* – in filth it shall be found (Jung, 1967, p. 35). *In sterquiliniis invenitur* comprised the summary statement for a set of beliefs that apparently arose spontaneously among those who were seeking perfection, or the means to perfection, in pursuit of the philosopher’s stone. This set of beliefs was predicated on the assumption or the discovery that the seeds of what redeems were to be found within what was frightening and upsetting (read: anomalous) – and, therefore, within what had been devalued or ignored, precisely because it was frightening or upsetting. Alchemy, in its psychological aspect, put forth the following hypothesis: the world remained in a corrupt and base state in precise proportion to the degree that “what matters” had been ignored or improperly attended to. This corrupt and base state, analogous to the stultification or petrification of the past, was exactly that which eternally invited the “retribution of God” (Jung, 1952; 1963; 1967; 1968; Eliade, 1978b; Peterson, 1999a; 1999b). Forms of knowledge – forms of wisdom, to speak more precisely – predicated on such themes found their first modern secular flowering in the psychoanalytic schools. Freud, although vehemently anti-religious in his central outlook (Freud, 1961), nonetheless made “repression” the hallmark of the pathological personality (1957, p. 16), and its treatment the centerpiece of therapy. It was sexual information that the Freudian hysteric avoided most completely, but it was the Victorian attitude and historical circumstance, engendered in part by the mortal threat of syphilis (Ellenberger, 1970), that made sexuality itself the prime phenomenal anomaly. Jung, for his part, believed that the individual lurking behind the persona (that is, behind absolute identification

with the power of the social structure or the state) might well be regarded as eminently, although invisibly dangerous – responsible, when grouped with like-minded others, for large-scale, not infrequently genocidal, acts of social psychopathology (1945/1964). This man or woman, persona-identified – suffering from a “psychopathology of health,” in Nietzsche’s words (that is, from a surfeit of social appropriateness) – is the person ready and willing to sacrifice both redemptive individuality and the anomalous other to maintain social respectability and the illusion of stable well-being. This makes the persona-identified individual the “willing executioner” described by Goldhagen (1996). Alfred Adler (1958) believed, similarly, that the neurotic lived a life-lie, accepting long-term future personal or distributed collective suffering and misery as the price to be paid for short-term illusory inflated self-esteem and “happiness,” and clearly and carefully described the deceit and treachery that was and remains part and parcel of unnecessary psychological suffering.

Post-psychoanalytic psychological thought, whether driven by explicit philosophical speculation or hard experimental data, nonetheless produced isomorphic conclusions. Continental phenomenologists such as Binswanger (1963) and Boss (1963) laid explicit stress on the necessity for authenticity and the pursuit of meaning in the face of existential uncertainty and angst, while American humanist existentialists such as Rogers (1959) and Maslow (1950) presented “genuineness” in the face of threat as the hallmark of health (or as the precondition for its development). George Kelly (1955), like Milton, attributed pathological human suffering to rigidity, arrogance and resistance to change – to refusal to risk the anxiety attendant upon transformation of key cognitive constructs, as a consequence of exposure to anomalous or otherwise threatening information. The proper development of the child, from the Piagetian perspective, is conditional upon the polar opposite of such a rigid attitude: to extract personality from the environment, so to speak – to construct himself – the child must embark on a daring process of assimilation and accommodation; must constantly encounter “information” that does not fit the currently extant schema, must effortfully modify previously-generated skill and representation (Friberg, 1991; Roland, Eriksson, Stone-Elander & Widen, 1987). This “stage theory” of development is, to put it in historical perspective, world-construction, anomaly-introduction, world-dissolution, world-reconstruction: recognizable instantly as either mythology-predicated or as the precursor to the observation-predicated development and elaboration of a mythology – and Piaget himself noted the association between his stage-centered theory of development and the ideas of Kuhn (1970) (Piaget & Garcia, 1983/1989).

The primary hallmark of behavioral therapy and its modern cognitive counterparts – divorced at least in principle from psychoanalytic thought and method – is nonetheless exposure (Foa & Kozak, 1986), and the reconstruction of world-view that is necessarily attendant upon such exposure (reconstruction of “cognitions” of self and world). Guided supervised exploration of what has been habitually avoided (including the “ground” defined by extreme trauma) produces acquisition of new representation and development of new skill. This apparently means return to “emotional stability” – but really means (1) increased capacity to transform previously frustrating and frightening interaction with the “environment” into what is currently and validly desired but nonetheless still hovering out of reach and (2) capacity to generalize the presumption that the individual can face the terrible unknown and prevail (Williams, Kinney, Harap & Liebmann, 1989). The classical (and not-so-classical (LeDoux, 1996)) behavioral view is that the learning attendant upon exposure is something akin to simple habituation – that is, something like “getting used to.” It is far more likely to be the case, however, that the consequences of guided

exposure produce a complex learning procedure involving the “mapping” (that is, the categorizing or recategorizing) and mastering of hitherto unmastered situations or territories, accompanied by the oft-painful and frightening processes of categorical restructuring described by Piaget.

The determinate world of experience, simultaneously internal presupposition and external social construction, constitutes order, security, tyranny, *yang*, set up against “chaos” – indeterminacy, unpredictability, danger, possibility, *yin*. Order is inherently unstable, as the chaos or complexity encapsulated by previous effort continually “conspires” to re-emerge. New threats and anomalies constantly arise, as the “natural world” ceaselessly changes; these threats may be ignored, in which case they propagate, accumulate, and threaten the very integrity of the current mode of being. Alternatively, the unknown may be forthrightly faced, processed (assimilated) and transformed into a beneficial attribute of the renewed world. Upon this “grammatical” edifice – determinate world, indeterminate world, process of transformation – is erected every narrative; perhaps every “theory” of personality transformation; perhaps every system of truly religious thought, as well (Peterson, 1999a). Error must be recognized, and then eliminated, as a consequence of voluntary exploration, generation of information, and update or reconstruction of skill and representation. Things that are bitter, feared and avoided must nonetheless be approached and conquered, or life finds itself increasingly restricted and miserable. “Heroism” – that is, creative, exploratory, classificatory, communicative endeavour – is thus the best solution provided by humanity to every problem that besets us. It is in the voluntary embodiment of the heroic pattern, therefore, that the most fundamental form of meaning is to be found.

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- [Figure 1](#). The grounding of a determinate-world in motivation
- [Figure 2](#): The real-time evaluative role played by emotions
- [Figure 3](#): Identity as the sequencing and rank-ordering of determinate worlds
- [Figure 4a](#): The emergence of within-determinate-world anomaly
- [Figure 4b](#): The emergence of between-determinate-world anomaly
- [Figure 5](#): Meta-identity, or the transformation of determinate worlds

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