EVOLUTIONARY NEUROTHEOLOGY
AND THE VARIETIES OF RELIGIOUS EXPERIENCE
(EXTENDED VERSION)[*]

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ABSTRACT

My goal is to outline an evolutionary neuropsychological foundation for spiritual and religious experiences. Central to this account are concepts from archetypal psychology, which, on the one hand, explain the structure of common religious experiences, but, on the other, are grounded in ethology and evolutionary biology. From this it follows that certain religious phenomena are objective, in that they are empirical, stable, and public. As a consequence, certain theological claims can be objectively confirmed or refuted. However, it would be a mistake to assume that this approach reduces religious experiences to the "merely psychological" or considers them inessential epiphenomena in a materialist universe. On the contrary, I will show that it demonstrates the compatibility and even inevitability of transcendental religious experience—and its crucial importance—to biological beings such as ourselves. (Along the way I will advance some concrete hypotheses about the possible role of specific brain systems in religious experience.)

I.   OVERVIEW

How can we achieve a unified understanding of the universe, which comprehends the physical, psychical, and spiritual dimensions of reality? In this chapter I will argue that the archetypes, as described in the psychological theories of Jung and his followers, provide the crucial link between the material and spiritual worlds: on the one hand, they are grounded in evolutionary neuropsychology; on the other, they are the objective constituents of the spiritual world. This might seem to reduce the spiritual realm to the "merely psychological," or even to neural epiphenomena, but I will argue that this is a misinterpretation of the theory, and that the gods (or God) are objectively real and crucially important for meaningful human life.

An additional part of my goal is to show that science does not imply atheism, for certain theological propositions are consistent with, and indeed implied by, contemporary science. I also hope to show that the religious believer should not feel threatened by evolutionary theory, for it in fact implies the reality of a spiritual realm.

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In brief, I will proceed as follows. In the next section I will review the main ideas of archetypal psychology, but emphasizing their evolutionary basis (drawing upon Stevens, 1982, 1993). Section III explores the religious implications of the archetypes in the context of their material embodiment. In the final section I will review possible neuropsychological bases of religious experience.

II. EVOLUTION AND THE ARCHETYPES

A. Ethology and the Structure of Behavior

All animal species exhibit characteristic behavioral patterns, commonly called instincts. These behaviors are served by perceptual systems, which are also characteristic of the species. These perceptual-behavioral structures, which are common to all members of a species, change very slowly, on evolutionary timescales, as the species continues to adapt to its (possibly changing) natural environment. The functions of these perceptual-behavioral structures must be understood in the context of the species' *environment of evolutionary adaptedness*, that is, the environment in which it has historically evolved and therefore to which it is adapted. One of the contributions of modern ethology, as developed especially by Konrad Lorenz and Niko Tinbergen in the mid-twentieth century, was to recognize that the meaning and function of behavior cannot be understood outside of this environment.

A species' genotype defines a characteristic life-cycle pattern for each member of the species as it progresses from birth to death. However, the phylogenetic pattern of the species is expressed ontogenetically by an individual's development in and interaction with its particular environment, which may differ more or less from the environment of evolutionary adaptedness. (This is especially the case for modern humans, as will be discussed later.)

Species-characteristic perceptual-behavioral patterns are encoded in the structure of the brain, which is a result of the developmental program encoded in the genome. Various behavioral patterns (e.g., mating behaviors) may be *potentiated* at appropriate stages in an animal's development (e.g., sexual maturity), but they are *activated* through an *innate releasing mechanism* (IRM) by means of a *releaser* or *sign stimulus* (e.g., an estrus-related pheromone).

The human species is also characterized by genotypic perceptual-behavioral structures. Which specific structures are phylogenetic characteristics of our species ("nature"), and how they are ontogenetically modified by an individual's development in his or her particular environment ("nurture"), should be left to empirical research, and not prejudged by psycho-socio-political ideology. For my argument, it is sufficient to acknowledge that *Homo sapiens*, like other animal species, has characteristic perceptual-behavioral structures.

B. Archetypal Psychology and the Structure of the Psyche

Ethology studies species-characteristic perceptual-behavioral structures "from the outside," that is, by observing animals' behavior in their natural environment. However, when *we* are the animal in question, we may ask how these perceptual-behavioral

structures are experienced "from the inside." The corresponding psychological structures are what Jung called *archetypes*: "To the extent that the archetypes intervene in the shaping of conscious contents by regulating, modifying, and motivating them, they act like the instincts" (Jung, *CW* 8, ¶404).

The archetypes are often confused with innate images, but Jung was explicit, especially in his later work (e.g., *CW* 9, pt. 1, ¶155), that they are not images, but dynamical structures of perception and behavior. They do not become images until they structure conscious content after being activated by a sign stimulus or other cause. The archetype "is not meant to denote an inherited idea, but rather an inherited mode of functioning, … a 'pattern of behavior'" (Jung, *CW* 18, ¶1228).

The archetypes reside in the *collective unconscious*, for the archetypes are unconscious until they are activated, and they are collective in that they are common to all humans. Although this idea is surrounded by much mysticism, "The hypothesis of the collective unconscious is, therefore, no more daring than to assume that there are instincts" (Jung, *CW* 9, pt. 1, ¶91). In addition to the collective unconscious, we each have a *personal unconscious*, which is a result of our individual ontogenies in our particular environments (more later on this process).

Like the instincts to which they correspond, archetypes are *potentiated* at particular developmental stages in accord with a phylogenetically determined life-cycle (the human life-cycle). When an appropriate releaser (sign stimulus) occurs in the environment, the archetype is *actualized*, and begins its work of structuring conscious perception and of influencing motivation and behavioral disposition. Because the releaser is keyed into the archetype, the triggering situation or relationship is perceived as numinous and significant; the psyche is reoriented toward (evolutionarily) appropriate action. As examples, consider encountering a sexually exciting person or being confronted by a threatening, angry person.

Complexes, which are webs of associations, are created by intense or repeated activation of an archetype in the ontogenetic psyche; therefore they have personal material surrounding an archetypal core. Complexes normally reside in the personal unconscious, but when activated, they can intrude on consciousness by influencing perception, motivation, and behavior. We tend to think of complexes as pathological, but it important to understand that they are normal components of our psyches; indeed some are essential for our normal functioning, as will be explained in the next subsection. They are "the functional units of which the ontogenetic psyche [is] composed" (Stevens, 1982, p. 65). Both archetypal actualization and complex formation follow the laws of association: the law of similarity and the law of contiguity (Stevens, 1982, p. 65). That is, associations, which constitute complexes and activate archetypes, are formed on the basis of similarity or co-occurrence.

The thwarting of "archetypal intent" can nucleate pathological complexes. Thus Stevens' Fourth Law of Psychodynamics says, "Psychopathology results from the frustration of archetypal goals" (Stevens, 1993, p. 86). However, this does not imply that archetypes should govern our behavior; rather, our moral problem is "what *attitude* we adopt to these fundamental *a priori* aspects of our nature—how we live them, and how

we mediate them to the group. It is the ethical orientation that counts." (Stevens, 1982, p. 240)

C. Some Specific Archetypes

It will be worthwhile to review some of the archetypal structures identified by Jung and his colleagues. Readers familiar with archetypal psychology might want to skim the remainder of this section. [I am using the term "archetypal psychology" somewhat more broadly than Hillman defined it (1970; see also 1983, ch. 1), because I need to explore the connections to evolutionary neuropsychology.]

One of the fundamental archetypal relations for all primates is that between mother and child. As the newborn infant begins to discriminate itself from its environment, the archetypal child-parent axis forms (the foundation of the ego-Self axis, discussed later). With greater awareness the child-parent axis differentiates into the child-mother axis and, from the child's perspective, the *Mother* archetype is actualized. Among many other things, the archetypal Mother symbolizes the source of care; she expresses home and family (the *Eros principle* and the *centripetal* orientation of the ego).

Later, as the father assumes a more important role, the *Father* archetype is actualized as one pole of the archetypal relationship between father and child. He is especially the source of order and mediates the outward relation to society and the rest of the world (the *Logos principle* and the *centrifugal* orientation of the ego).

As the child's sexual identity develops (as early as eighteen months), the *contrasexual* (opposite sex) characteristics remain undeveloped in the unconscious (analogous to contrasexual physical attributes after puberty: e.g., a man's breasts, a woman's clitoris). The contrasexual part in the female psyche is called the *Animus* (Latin for spirit, thought, will), and in the male is called the *Anima* (Lat., soul, vital principle). The contrasexual part exists both as an archetype, conditioned by biological development, and as a complex, conditioned by the environment. That is, the Anima/Animus is partly phylogenetic and partly ontogenetic; it is a sequential elaboration of the Mother or Father archetype.

There are many other archetypes, most of which are familiar from mythology (e.g., Maiden, Wise Old Man, Trickster), but they do not need to be discussed at this time. Although mythologists and archetypal psychologists are inclined to classify and name them, it is important to remember that they are connected into a continuum or continuous "field" in which there are real distinctions, but also borderline cases (von Franz, 1974, ch. 8).

The archetypal field as a whole is called the *Self*, which is therefore the sum total of human archetypes. As such it is the psychical aspect of the perceptual-behavioral structure encoded in the human genome, and hence it constitutes the "phylogenetic destiny" of the psyche. "The self is our life's goal, for it is the greatest expression of that fateful combination we call individuality" (Jung, *CW* 7, ¶404).

The Self is unconscious as well as conscious, and therefore must be carefully distinguished from ego-consciousness, discussed next. "The self is not only the center but also the whole circumference which embraces both consciousness and unconscious; it

is the center of this totality, just as the ego in the center of the conscious mind" (Jung, *CW* 7, ¶274).

The *Ego* is the individual conscious mind, a complex that perhaps evolved to facilitate our adaptation to the environment, and is responsible for actualizing the life-cycle plan of the Self. Ego-consciousness has its origin in the "Eros of relationship" (starting with the child-mother bond), which creates the Ego-Self axis (Stevens, 1982, pp. 95-6). Although ego-consciousness is crucial to our human nature, we tend to overvalue it, and forget that it is an "organ" evolved to facilitate the human species' survival in its environment of evolutionary adaptedness. Many spiritual practices (as well as psychotherapeutic practices) are directed toward achieving a proper balance between the Ego and the Self.

The *Persona* (Latin: mask, role, character) is a complex, built on the Ego, that mediates the individual's adaptation to society. It is the face we present to the world (e.g., through the habitual attitudes and manners of behavior of our class and vocation). "One could say, with a little exaggeration, that the persona is that which in reality one is not, but which oneself as well as others think one is" (Jung, *CW* 9, pt. 1, ¶221). Nevertheless, our personas are essential to our functioning as social animals, so long as we avoid the danger of confusing our personas with our Selves.

The *Shadow* comprises all the traits and qualities consciously rejected by the individual and their culture (collective *consciousness*). It is therefore a complicated, multilayered complex comprising material rejected by the individual, by his or her family, and by larger significant groups, up to the culture at large. Like all complexes, it also has an archetypal core, based on an innate predisposition to dichotomize, but perhaps also including a phylogenetic predisposition against certain behaviors (e.g., incest). However, since the Shadow compensates our conscious attitudes (which may be imbalanced), it is not entirely negative.

The *Superego* is the "moral complex," which is essential to the functioning of society; it has an archetypal core, but is activated by the parents (perhaps through a fear of rejection as a consequence of unacceptable behavior). Human beings have a phylogenetic predisposition to learn rules (linguistic, cultural, social, religious, political), and through it the Superego is built from acquired ethical norms. It governs communication on the Ego-Self axis, that is, it monitors and may inhibit material from coming into consciousness from the unconscious mind.

In the preceding paragraphs I have reviewed some of the most important archetypes and complexes characteristic of human beings, as identified by the empirical investigations of Jung and his followers. However, since ethology has established that some of our human perceptual-behavioral structures are shared with non-human species (e.g., mother-child bonding and social behavior in other primates), it is plausible to suppose that these animals also experience corresponding archetypes, not identical but homologous. ("Homology refers to similarities between two or more species which are due to shared characteristics inherited from a common evolutionary ancestor …," Harré & Lamb, 1986, p. 63.) Therefore, behind the archetypes that are our common human heritage, we can find others that are common to all primates; beyond these are the

archetypes of mammals and of all vertebrates. Thus, to explore completely the structure of the human psyche we must

> go back much further, back to the hunter-gatherer existence for which our psyches were formed, back to the archetypal foundations of all human experience, back to the hominid, mammalian, and reptilian ancestors who live on in the structures of our minds and brains. (Stevens, 1993, p.5)

Can we go even further? Certainly some aspects of the structure of our psyches are consequences of the fact we are living beings, and further, that we are physical systems. As Jung said, "the 'psychic infra-red', the biological instinctual psyche, gradually passes over into the physiology of the organism and thus merges with its chemical and physical conditions…" (*CW* 8, ¶420). For example, physical systems of all sorts exhibit characteristic forms of dynamical behavior (equilibrium, cycles, and chaos), which are also characteristic of the psyche and are therefore archetypal.

If we follow this line of reasoning, we are led to conclude that the most fundamental and universal archetypes are the laws of nature (whatever they may be discovered to be) experienced psychically (i.e., "from the inside," as opposed to through external observation). Therefore, among the most fundamental archetypes are the numbers, considered as qualitative ideas (e.g., unity, dichotomy, conjunction), for number "preconsciously orders both psychic thought processes *and* the manifestations of material reality" (von Franz, 1974, p. 53). And so Jung said, "I have a distinct feeling that number is a key to the mystery, since it is just as much discovered as it is invented" (von Franz, 1974, p. 9). These considerations may seem to stretch the idea of the unconscious too far, but they are necessary if we are to achieve an understanding that embraces the physical, psychical, and spiritual.

III. ARCHETYPAL THEOLOGY

A. The Archetypes and the Gods

Having reviewed some of the principal archetypes and their evolutionary neuropsychological foundation, I will turn to their theological implications. It is best to begin from a polytheistic perspective, for "archetypal psychology is necessarily nonagnostic and polytheistic" (Hillman, 1975, p. 226). (The essentially polytheistic nature of archetypal psychology is discussed in detail by Hillman, 1983, ch. 10; see also Miller, 1981.) Nevertheless, my conclusions apply equally well to monotheism, as is explained later. In any case, the one-fifth of humanity that follows a polytheistic religion will find my remarks immediately applicable, while the other four-fifths will benefit from the objectivity of distance.

The archetypes are much bigger than individual people, and therefore no person can completely fulfill an archetype. It is normal to *project* an archetype onto a person (such as projecting the Mother archetype onto your personal mother), but with maturity we retract the projections, and differentiate the real person from the idealized archetype. Nevertheless, the unfulfilled potential of the archetype remains, and we are left with a longing for the idealized figures they represent. Further, the archetypes call for complete actualization (for that is their biological function), and urge us to seek them. Likewise,

the sum total of the archetypes, the Self, seeks actualization of the genomic potential of the species in the life of the individual, which gives rise to the drive for fulfillment that Jung called *individuation*.

Once the projections are withdrawn, we realize that the archetypes exist independently of the concrete individuals that may manifest them; or, in other words, we may say that the archetypal structures exist in the genotype independently of the individuals that trigger their innate releasing mechanisms. That is, the archetypes are autonomous; they exist independently of human psyches in the same sense that the human genotype exists independently of individual humans.

For example, when the projection of the Mother archetype is withdrawn from the concrete mother, the archetypal Great Mother remains to represent the Eros principle. Similarly the personal father comes to be differentiated from the Heavenly Father as representative of the Logos principle. These are, of course, only two examples (though important ones) of many.

It is well known that the archetypes correspond to the gods of various pantheons, and that mythology often encodes archetypal relationships; there is no need to attempt to summarize here the extensive specific work of many archetypal psychologists (Jung, 1998, may be cited as an introduction). Rather, I will take the identity of god and archetype for granted, and focus on the question of whether the gods are real or "merely psychological." (Henceforth I will use "archetype" and "god" more or less synonymously.) According to common scientific standards, we may say that the archetypes (the gods) are objectively real phenomena if they are *empirical*, *stable*, and *public*.

The archetypes are *empirical phenomena* in the primary sense of those words because they manifest as appearances (Greek, *phainomena*) that arise in experience (Grk., *empeiria*). The archetypes themselves are not directly experienceable, because they reside as potential perceptual-behavioral structures in the unconscious. However, we experience their effects when they actualize in consciousness, and from these empirical effects we can infer the archetypal structures causing them, which does not make them any less real. "The existence of the instincts can no more be proved than the existence of the archetypes, so long as they do not manifest themselves concretely" (Jung, *CW* 9, pt. 1, ¶155). Science commonly infers, from their effects, causes that are not directly observable (e.g., elementary particles, force fields).

That these experiences need not have external referents, that is, corresponding physical phenomena external to the observer, does not negate their empirical validity. Psychology must take them as givens (Lat., *data*), for its subject matter is the psyche and whatever appears to it (*phainomena*). All sciences, from physics to sociology, are grounded in the experiences ("observations") of an individual psyche.

The archetypes are *stable* phenomena, another criterion of objective reality. From the earliest recorded mythologies, to the cosmologies of surviving traditional cultures, to the dreams and fantasies of contemporary people, we find the same archetypes recurring across time and place. Indeed, it was this observation that first led Jung to hypothesize the existence of archetypes.

> The concept of the archetype … is derived from the repeated observation
> that, for instance, the myths and fairy tales of world literature contain
> definite motifs which crop up everywhere. We meet these same motifs in
> the fantasies, dreams, deliria, and delusions of individuals living to-day.
> These typical images and associations are what I call archetypal ideas.
> (Jung, *CW* 10, ¶847)

The forgoing also shows that the archetypes are *public* phenomena; that is, when suitably trained observers investigate the unconscious, they reach consistent conclusions about its archetypal structure. (The prerequisite of suitable training is common to all but the simplest sciences; one must learn how to read even a thermometer correctly.)

Therefore the archetypes are empirical, stable, and public, which are the accepted scientific standards for the objective reality of a class of phenomena. Hence the archetypes — the gods — are real.

Nevertheless, it's worthwhile to say a little more about the manner of existence of the archetypes, about their *ontological status*. Fortunately, we have some analogous situations to guide us, for if, as has been argued, the archetypes are the psychical aspect of phylogenetically-defined perceptual-behavioral structures, then the archetypes are functions of the human genotype, which is a mathematical pattern. Therefore the archetypes exist in the same way as other mathematical patterns, as (Platonic) *forms* independent of their physical embodiment (or lack thereof). They are formal, not material.

This conclusion is strengthened by our broadened perspective on the archetypes, which reaches beyond the human species, to non-human species and their underlying physical processes. For these processes are governed by mathematical laws, and therefore their archetypal correspondents in the psyche must be likewise mathematical in structure. Again, the existence of the archetypes (the gods) is akin to the existence of mathematical patterns (forms). The laws of nature (whatever they may be) are what they are, and would be so, even if there were no material universe to obey them. Therefore the archetypes exist independently of physical embodiment (they are immaterial).

That the physical, psychical, and spiritual worlds converge in the realm of mathematical form is not a new idea; it is attributed to Pythagoras, and was developed over two millennia of Platonic, Neoplatonic, and Neopythagorean thought. Indeed, it lurks in the intellectual background of archetypal psychology (Hillman, 1983, pp. 4-5). However, the modern perspective dictates some changes in this venerable theory, which we must consider. (A full discussion of the relation of Neopythagoreanism to evolutionary neurotheology is beyond the scope of this article.)

Traditionally, the archetypes have been considered eternal and unchanging, and so they are, from an individual's perspective. However, the archetypes do change slowly with the human genotype, that is to say, at evolutionary timescales. Therefore they have changed little if at all in the last hundred thousand years or more. The deeper archetypal structures are even older (at least four million years for hominids, 55 million years for primates, 500 million for vertebrates); the laws of physics are unchanging and therefore eternal. Thus we can conclude that the archetypes — the gods — change very slowly.

Certainly they have not changed in recorded history. Rather, our gods are the same as those of our hunter-gatherer ancestors who lived a hundred thousand years ago.

The reader may grant that the archetypes are objectively real and effectively eternal, but may be reluctant to call them "gods." To argue that they deserve this appellation requires a discussion of their role in our lives.

The archetypes are a source of meaning because they integrate individual lives into the greater patterns of humanity and the universe; they give transpersonal meaning and significance to situations and relationships in human life. From an ethological perspective humans are primed, through innate releasing mechanisms, to respond in characteristic ways to the corresponding releasers (sign stimuli). When such a pattern of perception and behavior is released, the individual fulfills part of his or her destiny as a member of the human species. From a psychological perspective, the sign stimulus appears charged with significance and meaning; the archetype is activated and appears in consciousness as an archetypal image. When an archetype is actualized, the resulting situation or relationship is experienced as numinous, supernatural, uncanny, hallowed, blessed, or miraculous.

Being in love is a familiar example of an archetypal situation; everyone has experienced its power to transform perception and behavior. The beloved is surrounded by a numinous aura, and the relationship is charged with meaning. Therefore, it is not surprising that the ancients saw the hand of a god (Aphrodite or Eros) in such relationships. Indeed, "Aphrodite" and "Venus" were sometimes used as common nouns meaning sexual love, desire, and charm, and Eros (love, desire) was worshipped as a god from an early period (Hornblower & Spawforth, 1996, s.v. Eros). Plato (*Phaedrus* 245b-c) famously classified love (*erôs*) as a kind of divine madness (*theia mania*). Thus, "Love is not a thing sent from heaven for the advantage of both lover and beloved"; rather "this sort of madness is a gift of the gods, fraught with the highest bliss" (*Phaedrus*, loc. cit.). Significantly, Plato claimed that love stems from the "recollection" (*anamnêsis*) of the eternal forms (*eidê*), acquired before birth; in our terms, love is an actualization of certain innate archetypal patterns.

When we are in an archetypal situation, we are under the influence or compulsion of a god. That is, we are drawn into the narrative of a phylogenetic "script" (which does not imply, of course, that we have no control over the situation); we may feel like we are living a myth (as, indeed, we are).

There are two poles to the archetypal relation: the experiencing ego and the "other" towards which the perceptual-behavioral "script" is directed. The entire relationship is divinely (archetypally) guided, and each pole may be experienced as inspired by a god. The ego may experience itself as "possessed" by a divinity (Eros, in the proceeding example), whose intentions may conflict with the ego's. Similarly, the "other" (often a person) may be perceived as divine, numinous, magical, or radiant. For example, the beloved is experienced as a god or goddess:

> first there come upon him a shuddering and a measure of that awe which the vision inspired, and the reverence as at the sight of a god, and but for fear of being deemed a very madman he would offer sacrifice to his beloved, as to a holy image of deity. (*Phaedrus* 251a)

Of course, the beloved is not a god or goddess. People are not archetypes, and the practical difficulties of treating them as such are well known. In psychological terms, we should withdraw the projection; although the archetypal relation is authentic, we cannot forget that an archetype cannot be manifested completely by an individual; the archetype may touch a human, but it is superhuman and resides elsewhere.

It is even more dangerous to confuse oneself with a deity, the ancient sin of hubris, the psychological condition of *ego inflation*. "Possession" by a divinity is not necessarily a bad thing (who would reject the divine madness of love?) — another word for it is inspiration (Grk., *entheos*, "having the god within") — but it is crucial to be consciously aware of what is taking place (an archetypal actualization), nor should one abandon the "ethical orientation" of the ego.

B. Morality and the Gods

Are the gods good? Ancient theologians debated the topic. The traditional mythology did not present them as moral ideals, for "Homer and Hesiod have ascribed to the gods all things that among men are a shame and a reproach — theft and adultery and deceiving one another" (Xenophanes, DK 21B11). Popular belief tended to agree, but intellectuals were more inclined to think that the gods must be good. "Hateful is the poets' lore that speaks slander against the gods" (Pindar, *Olympian* IX). So also Euripides has his characters say, "I do not believe that any divinity is evil" and, "If gods do anything base, they are no gods" (*Iph. Taur.*, 380; *Beller.*, fr. 292). Plato says, "In God there is no sort or kind of unrighteousness" (*Theae.*, 176b), and simply, "God is good" (e.g., *Rep.*, 379b).

If we take the ethological perspective on the problem, we can say that archetypal structures have evolved by conferring selective advantage to humans in our environment of evolutionary adaptedness; in this broad sense, they can be called "good." But does that make them moral ideals? Certainly, the archetypes are real forces, which cannot be ignored or thwarted with impunity; psychopathologies result from "frustrating archetypal goals" (see Section II.B above). But few would advocate that we blindly follow our biological urges.

Furthermore, the gods may have differing demands, and may even war with one another. At least that was the view of traditional mythology and epic, which, again, the intellectuals found unacceptable. "Cease from this vain babbling; far from the Immortals leave all war and strife," Pindar said (*Ol.* IX). However, ethology teaches us again that the traditional view was more accurate. An animal may find itself in the grips of two incompatible patterns of behavior (fight or flight is an obvious example); ethologists say that it is in a state of *conflict*. Psychologically we may find ourselves in the grip of incompatible archetypes (gods), each urging toward the fulfillment of its own purpose. So three goddesses appeared to Paris, each pushing him to fulfill her own archetypal plan. From a theological perspective, we may be placed in real existential dilemmas. Gods cannot be disobeyed without dire consequences, yet in a case of archetypal conflict we are faced with reconciling warring deities. In facing such a dilemma, it is not simply a matter of choosing good over evil, for each of the gods is good in the sense that they serve the species (and, beyond that, life in general). They each have a legitimate claim on us.

More accurately, I think, the gods should be considered "beyond good and evil." Psychologically, all archetypes are positive and negative, because they are prior to conscious discrimination, and therefore prior to human morality. Hence, Aphrodite causes us to love our spouses and to start families, but also urges us to extramarital affairs. Ares encourages us to strike when we're angry, but also to defend our homeland. The clever words granted us by Hermes can win support for a just cause, or they can cheat and deceive. The Sky Father Zeus enforces laws and rules, but sometimes to the point of cruelty. The Great Mother nurtures her children, but may smother or even devour them. And so on, for all the other gods.

In my examples, I have drawn from Greek mythology, as is often done in archetypal psychology, because of its seminal role in Western culture. Nevertheless, one may wonder how well these myths reflect human archetypal structures. Although it is ultimately an empirical question (which Jung and others have addressed through their investigations), we may with some confidence say that *the true gods are the gods of Paleolithic hunter-gatherers*.

Based on the work of Fox (1989), Stevens (1993, p. 67) observes that we have spent 99.5% of our species' history as hunter-gatherers, and therefore it is the environment and life of the hunter-gatherer that has contributed most to our genetic heritage. What was it like? Our communities were "organic extended kinship groups" comprising "forty to fifty individuals, made up of approximately six to ten adult males, about twice that number of childbearing females, and about twenty juveniles and infants" (Stevens, 1993, p. 67). They were homogeneous in beliefs and practices and structured around families (not necessarily monogamous). Such communities frequently encountered each other, for marrying, warring, and other purposes.

This is our environment of evolutionary adaptedness. Therefore, the gods who ruled these people are the gods who rule us yet, like it or not.

Of course we no longer live as hunter-gatherers, and few would advocate that we return to that life. Nevertheless, the archetypes are real forces, and while they should not be obeyed blindly, neither can they be ignored without consequences. It is the function of ego-consciousness to find ways to live in the modern world without denying the gods of our hunter-gatherer ancestors.

However, we should beware of supposing that the ego can dominate or repress the archetypes; the ego is an organ of the Self, not vice versa. To act as though the ego is all-powerful is, in fact, to be "possessed" by the Hero archetype (an authentic archetype, to be sure, but just one of many). "That way madness lies": ego inflation, which calls forth Nemesis (the "justifiable anger of the gods") to punish the hubris of the hero who imagines that he is the master over the gods (Hillman, 1975, pp. 178-80).

I have presented the archetypes in the context of "a polytheism which I do not on this occasion defend, for my only aim at present is to keep the testimony of religious experience clearly within its proper bounds" (James, 1985, p. 413). Nevertheless, the reader may be impatient about how it applies to monotheistic religions. Briefly, in archetypal psychology, the Self occupies a position comparable to the God of monotheistic religions (more on the Self below, III.F). The individual archetypes are then aspects of God, or subsidiary spirits (e.g., angels and demons). This, in fact, was

one way the classical gods were interpreted by early Christian theologians (e.g., Seznec, 1981).

C. *The Special Role of the Animus/Anima*

Among the archetypes the Anima/Animus has a special position, for it is the nearest component of the unconscious; therefore it is the proximate representative of the divine other. Thus, this archetype can function as a *psychopomp* (soul guide) leading us to greater knowledge and communion with spiritual world.

The Anima of a man often acts as divine Muse, a source of creativity and access to feelings, because she is open to the nonrational and so provides an opening to the unconscious and soul. Thus the ancient poets invoke their Muses. "Sing, Goddess!" begins the *Iliad*; "Tell me, Muse, …" the *Odyssey*; and Hesiod (*Works & Days*, 1-2) invokes,

> Ye Muses of Pieria, who glorify
> through songs: come hither!

It is more than just a convention. Another well-known mythological example of the Anima is Athena, who we see caring for Odysseus in the *Odyssey*.

Similarly, the Animus of a woman often acts as a source of rational purposefulness and intellect, and, as representative of the Logos principle, points the way toward the spirit. Many women have found the Animus to be a source of strength as they move into traditionally male vocations. Alternatively, the Animus may call a nun, for example, to become a "bride of Christ."

However, if the Anima or Animus is not consciously integrated, it may possess the ego or be projected on others in primitive ways. If it is projected, then a person may misperceive members of the opposite sex. For example, a man may perceive women as irrational children or seductive nymphs; a woman may perceive men as cold, aggressive, or remote. If possession occurs, then a person may act out the least differentiated characteristics of their contrasexual part. Thus, the animus-possessed woman may become inappropriately bossy, aggressive, judgmental, opinionated, or intolerant, while the anima-possessed man may become touchy, resentful, overly emotional, sentimental, or irrational (Jung, *CW* 9, pt. 2, ¶¶24-35).

Obviously, integration of the contrasexual part of the psyche does not mean losing one's sexual identity. Rather, by establishing a conscious relation with this archetype, one achieves greater psychic balance, and recruits its powers, especially in establishing a connection to the other archetypes (gods). This is especially the task of the second half of life, when the Self urges the psyche to reclaim its rejected and neglected parts. From a theological perspective, the gods and spirits call one to make alliances with them and to put the ego in service to the higher Self.

As remarked in Section II.C, the Animus/Anima exists as both archetype (god) and as complex. The archetype is a high god (e.g., Athena for men, Dionysos for women), whereas the complex is a more personal spirit, more involved with one's individual life. The complex thus acts in behalf of the archetype, serving as usual as mediator between

the personal and the archetypal. (For more on the Animus/Anima, see E. Jung, 1957, and Jung, *CW* 9, pt. 2, ch. 3.)

D. Complexes and Mediating Spirits

As discussed in Section II.B, the personal unconscious comprises complexes formed through the interaction of archetypes and our individual lives; in theological terms, we can say that each complex is the offspring of a god, assigned to an individual. The archetypes are the same for everyone, and in this sense they do not treat us as individuals. The complexes, however, are a hybrid of the general and the particular, the universal and the personal. We may even say that they "know" us, for the particulars of our individual histories are stored in the web of associations of which they are constituted. Therefore complexes function as mediating spirits, intermediate between a person and a god. It may seem an exaggeration to identify psychological complexes with mediating spirits, but "complexes behave like independent beings" (Jung, *CW* 8, ¶253); they are autonomous personalities.

The ancient Greek word for such a mediating spirit was *daimôn*, which could refer to any divine spirit, but was especially applied to the mediators between humans and gods; it did not have the negative connotation of our word "demon" (Burkert, 1985, III.3.5). Many ancient cultures believed that each man had a *genius* (and each woman a *iuno*) that was born with them and stayed with them throughout their lives; this personal spirit has been explicitly identified with the unconscious mind (Onians, 1951, pp. 127-67). Some philosophers thought that each person had both an attending "good spirit" (*agathos daimôn*) and an interfering "bad spirit" (*kakos daimôn*), sometimes euphemistically called "the other *daimôn*." This reflects the moral ambivalence of our complexes, which from the perspective of ego-consciousness may be good or bad. Like the archetypes (gods), the complexes (mediating spirits) have their own agendas, which may or may not agree with our egos'.

Also like the archetypes, we may be "possessed" by a complex, or project it onto others (that is, from our perspective, one of our complexes may "possess" another person).

Projection of complexes is not strictly a matter of perception on the part of the projector, for the receiver may accept the projection and therefore also experience the possession. The two may therefore enter into a reality-altering state of mutual projection. For example, a person may accept the role of scapegoat projected onto them by a group.

Mutual projection also arises in families, since children are prone to accept projection from their parents. Unlived or rejected aspects of the parents may be projected onto the children, who become possessed and either reinforce or compensate their parents' imbalances; such possessions can continue even after a parent's death. Such is one cause of "family curses" (e.g., the House of Atreus), in which pathological complexes are passed on from generation to generation. The chorus in Aeschylus' *Agamemnon* addresses the "*Daimôn* that falls upon the house and the two sons of Tantalus," which Clytemnestra calls the "thrice glutted *daimôn* of this race" (*Ag.* 1468, 1475-6).

Projection and possession (which are not necessarily bad) may be difficult to identify, because our complexes are closely bound to our personalities, and therefore hard to

differentiate from ourselves. Indeed, it can become difficult to distinguish one's authentic personality from the crowd of personal complexes.

One sign of "possession" is a defensive feeling when the complex is threatened. Therefore, a person may overreact emotionally when an intellectual position (such as a philosophical or political opinion) is criticized or even questioned. In general, complexes are created from strong emotional charges, and so sudden changes of mood or feeling (in the absence of obvious causes) may indicate that one has been possessed (or released from possession). Also, complexes often appear in dreams.

Projection may also be a cause of "soul loss," since the psychic energy invested in a complex may be projected onto another person, and therefore be lost when that person is absent or has died; the *daimôn* has absconded with the projector's soul. "Soul retrieval" then requires that the projection be withdrawn — the *daimôn* found and brought back — and the psychic energy, which it had absorbed, be returned to the patient.

Since our "personal demons" affect our perception and behavior, it is important to be aware of them, even to befriend them. Because they are created by a god, they cannot, in general, be "banished" (dissolved), nor should we wish to do so, for they are channels of divine (archetypal) energy into our personal lives. On the other hand, we cannot allow ourselves to be ruled by them, for we have a conscious ethical standpoint, but they do not; like the gods, they are beyond good and evil.

Therefore, the first requirement is to come to know your "demons," especially when they are possessing yourself or (via projection) someone else. Once known (and even named), they are less liable to possess or project. Next, one must enter into a dialogue with them, and reach some mutually agreeable alliance or, if that be impossible, reconciliation. Since they are spirits mediating between the gods and us, they can become invaluable allies in helping us to live in accord with divine providence, which is the goal of psychological individuation (see below on the Self).

Again, possession and projection are not necessarily bad. To be the object of projection can be liberating and empowering; consider the effect of being the object of someone's infatuation, or of being perceived as a great genius. The result can be beneficial, provided we bask in the glow only for a while, and avoid possession.

Furthermore, since a complex is a spirit mediating our relation to a god (archetype), it can be an enormous source of inspiration. It is no coincidence that the most creative people in all endeavors seem to be "possessed" by their callings. As Jung remarked, "The original meaning of 'to have a vocation' is 'to be addressed by a voice'." Hence,

> Anyone with a vocation hears the voice of the inner man: he is *called*. That is why the legends say that he possesses a private daemon who counsels him and whose mandates he must obey. The best known example of this is Faust, and an historical instance is provided by the daemon of Socrates. (Jung, *CW* 17, ¶¶300-4)

For more on complexes see, for example, von Franz (1980).

E. The Shadow: Collective and Personal

Gods in polytheistic religions are not generally all-good or all-bad, therefore we do not find figures comparable to Satan in these religions. Rather, each of the gods has good and evil aspects, although even this puts the issue too much in our terms; the gods, as agents of divine providence, have their own purposes, which we may view from a human perspective as good or ill (for us). We are all too apt to assume that humans are at the center of the universe, and therefore that the perspective of human egos and our collective conscious values should be the universal norm. Nevertheless, we are humans, and there are spirits and perhaps even gods that are evil in human terms.

We may begin at the personal level: we have seen (Section II.C) that the Shadow, which resides in the personal unconscious, comprises all the traits and characteristics consciously rejected by the ego; in this sense it is "evil" (by definition). The Shadow is a complex, and therefore everything I have said above (III.D) about complexes applies to it; in particular, it may possess and project. These are especially insidious in the case of the Shadow: since it embodies everything that we reject, we are loath to admit it as our own; Prospero takes an enormous step toward psychic integration when he says of Caliban, "this thing of darkness I / acknowledge mine" (*Tempest* V.i.324-5).

One simple way to discover the nature of your own Shadow is to ask yourself what sort of person you find most despicable or impossible to endure; that is your Shadow (Stevens, 1982, p. 215). Therefore, when we encounter a person who strikes us this way, we can be confident that we are projecting our Shadow onto them. (To be sure, such a person normally has something in common with our Shadow — that is the releaser that invites the projection — but it may be trivial compared to what we project onto them.) Worse, they may even accept our projection, and by becoming possessed by our Shadow, become our worst nightmare. However, if you are familiar with your Shadow complex, you may recognize its familiar features in the other person, and be able to withdraw the projection to both of your benefits.

Since the Shadow grows out of a person's individual development, it incorporates consciously and unconsciously acquired values and beliefs about what is bad or wrong. Since much of this development takes place in the context of the family, much of the Shadow is likewise shared. Again, a collective Shadow complex common to a family (or larger group) may be experienced as a "family curse" (e.g., a tendency of abused children to become abusive parents, or a "curse" of substance dependency).

Further, the collective consciousness of a culture may generate a commonly shared Shadow, which then assumes the dimensions of "archetypal Evil." This Shadow may possess or project, like any other complex, and is especially likely to be projected onto minority or other disenfranchised groups. (Since the Shadow is consciously rejected by the group, it is by definition not "us"; therefore it must be "them.")

Failure to recognize the essential amorality of the gods leads to their (apparently negative) aspects being relegated to Shadow figures, which leads us into a distorted relationship with divinity. "The brighter the light, the darker the shadow it casts"; thus all-good Gods must have all-evil Devils to balance them. Similarly, failure to recognize our personal Shadows leads to their projection onto others.

As with all complexes, knowledge of the Shadow diminishes its power. Recognizing that the gods have their own purposes and attempting to understand them aids us in establishing a relationship with them that neither denies their reality nor requires us to abandon our ethical standpoint. The mediating spirits help to establish this harmonious relation with divinity.

Aside from avoiding possession and projection, knowing your Shadow has oter important benefits. Because it is the complement of collective and personal consciousness, it has many powerful characteristics and powers. If you are primarily a thinker, then your Shadow is dominated by feeling. Since your Shadow wants to bring a feeling orientation to life, by forming an alliance with the Shadow you can balance your conscious personality while satisfying its needs. In summary, integrating the traits of the Shadow into consciousness is a major stage in becoming psychologically whole.

Failure to assimilate our Shadows — individual and collective — is perhaps the biggest problem facing our world. (For more on the Shadow, see Jung, *CW* 9, pt. 2, ch. 2.)

F. The Self and the One

The archetypes, as psychical aspects of the instincts, all have their own purposes, but together — as the archetypal Self — they served the survival of our species in its environment of evolutionary adaptedness. So also, although the gods have their own agendas and purposes, together they are aspects of one archetypal system, which provides a universal foundation of significance and meaning for humankind. Therefore, many polytheistic religions have seen the gods as being under the direction of one chief god, or as constituting some kind of unified godhead, which is closely identified with the notion of divine providence. For convenience I will use Neoplatonic terminology and call this deity "the One."

Before discussing the notion of providence, however, we must look more closely at the godhead. As discussed in Section II.C, behind the human archetypes, we find more fundamental archetypes shared by all primates; thence we proceed until we come to the archetypes of all living things, and ultimately to the archetypes of all physical systems. From the physical side, whatever the evolved perceptual-behavioral structures of humans or other animals, they must obey the laws of nature (including the laws of evolution), whatever they may be. From the psychical side, whatever the archetypal gods of humans may be, they are subject to more remote gods who govern all life, as these in turn are subject to that One that is the psychical aspect of the laws of nature. Jung called this physical-psychical unity the *Unus Mundus* (One World). From the physical perspective, the eternal laws of nature govern the process of the universe through all time; from the psychical perspective, the eternal One — through timeless divine providence — governs the activities of all souls, including those of gods, mediating spirits, and mortals. (Such "governance," of course, need not imply determinism.)

Therefore we can see that the individual gods, with their various characters and purposes, are aspects of a One, which governs the entire universe. Thus, for example, Zeno of Citium said, "God, Mind, Destiny, Zeus — it is One Thing that is called by these

and by many other names" (*SVF* I.102), which include "Providence" and "Nature," according to Theodoretus (*SVF* I.176).

This divine One cannot but remind us of the God of monotheistic religions, but we must beware of transferring notions from the latter to the former. The One comprises the entire universe; it is all-inclusive and therefore paradoxical; as Heraclitus said, "God is day night, summer winter, war peace, glut hunger (all the opposites, that is the meaning)" (DK 22B67).

Even more so than the individual gods, the One is beyond good and evil, for it includes all the gods and everything else. Heraclitus again: "To God all things are fair and good and just, but humans hold some things unjust and some just" (DK 22B102). Certainly, many of the philosophers have told us that God is good, and that everything God does is good, but this "good" must be interpreted in the transvalued, super-human sense that it serves universal providence. We should not be so anthropocentric as to assume that this "good" will be to the benefit of the human species, let alone to the benefit of you or me.

Such a god and such providence may seem remote in the extreme. Nevertheless, the human archetypes — the gods of our hunter-gatherer ancestors — bring providence — and meaning and significance — into the human world and, both directly and through the agency of mediating spirits, into our individual lives. Therefore, by becoming conscious of these spirits and gods, and by striving to live, with their aid, in accord with providence, we can live meaningful lives through conscious, intentional participation in the destiny of the universe.

This is the lifelong process that Jung termed *individuation* (becoming *individuus* — undivided). That is, "Individuation is a conscious attempt to bring the universal programme of human existence to its fullest possible expression in the life of the individual" (Stevens, 1982, p. 142). (There are various practices, such as active imagination, for entering into dialogue with gods and mediating spirits; see Jung, 1997, or Johnson, 1986, for introductions.)

Within each of us is a Paleolithic hunter-gather; this is "the spiritual, inner and complete man" (*CW* 9, pt. 1, ¶ 529), the archetypal or primal human, sometimes called the *Archanthrôpos* or *Protanthrôpos*. But, although the archetypal human is a hunter-gather, we can neither blindly obey him (for we are not hunter-gatherers), nor can we blithely ignore him (for he is our essence). As in the other cases we have seen, our existential project is to reconcile modern life with the needs of this god. We become whole humans by consciously incarnating the god. (For more on the Self, see Jung, *CW* 9, pt. 2, ch. 4.)

IV. THE NEURAL BASIS OF ARCHETYPAL THEOLOGY

Much work remains to be done on the neural mechanisms underlying human instinctual behavior, and therefore the archetypes and complexes. Nevertheless a few hypotheses may be mentioned.

For convenience we may use a *quadripartite brain model*, based on MacLean's (1990) *triune brain model*. First we have the oldest parts of the brain, the "reptilian

brain," represented especially by the recticular activating system, which is crucial for maintaining alertness and consciousness and for basic instincts. Next is the paleomammalian brain, comprising the midbrain (especially the limbic system) and the paleocortex; it is concerned with appetites, emotions, and some of the less rigid aspects of the instincts. Upon these is built the neomammalian brain, represented by the neocortex. In humans its hemispheres are functionally differentiated, and so the third and fourth parts are the non-dominant hemisphere (normally the right), and the dominant (left) hemisphere.

Following Stevens (1982, pp. 247-75), it seems that most activity in the midbrain and lower regions is unconscious. Therefore it is likely that the archetypes have their neurological roots in the brain stem (and, below that, in physiological and physical processes, as already discussed). However, they also extend upward into the midbrain, and even into the cortical hemispheres, where they enter conscious experience. Although activity in the cortex is conscious, it has a different character in the two hemispheres, and so the dominant, verbal, "logical" left hemisphere may have trouble expressing the imagistic activity of the right hemisphere, which therefore seems mysterious and numinous (Stevens, 1982, p. 266). The personal unconscious and its complexes seem to reside in the lower cortical regions.

Individuation presupposes better integration of neural activity in all parts of the brain. The dominant left hemisphere has learned to inhibit information crossing the corpus callosum from the right hemisphere, and both hemispheres may inhibit inputs from the midbrain and brain stem. Various spiritual practices, such as prayer, meditation, and ritual can allow access to these deeper, more archetypal brain systems.

Further, the ventromedial cortex (subgenual cortex) controls communication between the prefrontal cortex and the limbic system, so it is an important mediator between consciousness and the unconscious. It seems to govern the integration of perceptions and thoughts into a meaningful whole; changes in its activity are correlated with mania and depression (Dreverts & al., 1997). Therefore increased activity in this area may be important in religious experiences, such as states of mystical union. Understanding the neuropsychology of such experiences does not diminish their reality, for they do in fact reflect real contact with the transcendent One.

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REFERENCES

Burkert, W. (1985). *Greek Religion*, tr. J. Raffan. Cambridge: Harvard University Press.

Drevets, W.C., Price, J.L., Simpson, J.R., Todd, R.D., Reich, T., Vannier, M., Raichle, M.E. (1997). Subgenual prefrontal cortex abnormalities in mood disorders. *Nature*, 386, 824-7.

Fox, R. (1989). *The Search for Society*. New Brunswick: Rutgers University Press.

Franz, M.-L. von (1974). *Number and Time: Reflections Leading toward a Unification of Depth Psychology and Physics*. Evanston: Northwestern University Press.

Franz, M.-L. von (1980). *Projection and Re-Collection in Jungian Psychology: Reflections of the Soul*. La Salle: Open Court.

Harré, R., & Lamb, R. (Eds.). (1986). *The Dictionary of Ethology and Animal Learning*. Cambridge: MIT Press.

Hillman, J. (1970). Why "archetypal" psychology? *Spring*, 1970, 212-19.

Hillman, J. (1975). *Re-Visioning Psychology*. New York: Harper & Row.

Hillman, J. (1983). *Archetypal Psychology: A Brief Account*. Dallas: Spring.

Hornblower, S., & Spawforth, A. (Eds.). (1996). *The Oxford Classical Dictionary*, third edition. Oxford: Oxford University Press.

James, W. (1985). *The Varieties of Religious Experience*. Camridge & London: Harvard University Press.

Johnson, R. A. (1986). *Inner Work: Using Dreams and Active Imagination for Personal Growth*. New York: Harper & Row.

Jung, C. G. (*CW*). *The Collected Works of C. G. Jung*, edited by H. Read, M. Fordham, & G. Adler. London: Routledge & Kegan Paul, 1953-78; New York: Pantheon, 1953-60, and Bollingen Foundation, 1961-67; Princeton: Princeton University Press, 1967-78.

Jung, C. G. (1997). *Jung on Active Imagination*, edited & introduced by J. Chodorow. Princeton: Princeton University Press.

Jung, C. G. (1998). *Jung on Mythology*, selected & introduced by R. A. Segal. Princeton: Princeton University Press.

Jung, E. (1957). *Animus and Anima*. Dallas: Spring Publications.

MacLean, P. D. (1990). *The Triune Brain in Evolution: Role in Paleocerebral Functions*. New York: Plenum Press.

Miller, D. (1982). *The New Polytheism*. Dallas: Spring Publications.

Onians, R. B. (1951). *The Origins of European Thought About the Body, the Mind, the Soul, the World, Time, and Fate*. Cambridge: Cambridge University Press.

Seznec, J. (1981). *The Survival of the Pagan Gods: The Mythological Tradition and Its Place in Renaissance Humanism and Art*, tr. B. F. Sessions. Princeton: Princeton University Press.

Stevens, A. (1982). *Archetype: A Natural History of the Self*. London: Routledge & Kegan Paul.

Stevens, A. (1993). *The Two Million-Year-Old Self.* College Station: Texas A&M
    University Press.