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A Guide for the Perplexed

A review of

The Neurobiology of the Gods: How Brain Physiology Shapes the Recurrent Imagery of Myth and Dreams

by Erik D. Goodwyn

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Jungian theory has been held by those outside the field as esoteric, convoluted, and just too difficult to comprehend. Its expressions have ranged from the outright mystical to the reductionist and from those strongly influenced by Freudian perceptions to those rooted in a more eclectic psychological and evolutionary basis (Gray, 1996; Samuels, 1985). Fortunately, *The Neurobiology of the Gods: How Brain Physiology Shapes the Recurrent Imagery of Myth and Dreams* avoids the extremes, and, whereas many books seek to explain too much (or do not explain at all), Erik Goodwyn provides a rational grounding of the root Jungian ideas in a base of current ethology, evolutionary psychology, and neurobiology. His purpose appears to be to remove Jungian theory from the esoteric world of 50 years ago and to make the work accessible in terms of scientific but nonreductionist concepts.

Writing from the perspective of late 19th- and early 20th-century science, Jung wrote in terms of the concepts of the day, yet he was incredibly prescient, and many of his

perceptions have been validated by neuroscience and ethology. His mystifying and often-mystified concept of the archetypes was grounded in the then-current theory of instincts.

Jung saw that the instincts gave rise, by a kind of metaphorical extension, to the entire realm of human experience and expression. The instinctual roots of birdsong, he saw, separated from sexual and territorial origins provided an understanding of the roots of art and music in human experience. Jung anticipated embodied consciousness by grounding human psychic experience in the archetypes, as the reflection of the instincts in consciousness. Those archetypes, he said, organize behavior according to their feeling tone: Events are understandable and take on meaning in terms of their reflection of that same tone—affective experience is the root of metaphor (Jung, 1967, 1968).

Goodwyn has recognized these linkages and provided a clear foundation for understanding and working with the Jungian corpus in terms of modern neuroscience and ethology. Although he misses some opportunities on the ethological end—innate releasers are absent from the discussion—his integration of affective patterns from the work of notables such as Panksepp, d'Aquili, and Newberg and the embodied consciousness of Lakoff and Johnson's (1980) *Metaphors We Live By* more than makes up for any such lack.

The Neurobiology of the Gods succeeds in updating the outdated language of Jungian theory and relating it to current concepts. The archetypal image is redefined in terms of not only visual but also kinesthetic and multisensory assemblages. Goodwyn clarifies the idea by eliciting the innate preferences and predispositions that reappear in modern literature as largely given: Things that look like spiders and snakes make one more susceptible to negative conditioning than do neutral stimuli; open savannah landscapes are associated with beauty and freedom; enclosed spaces associate to safety and refuge; and symmetry in human form is related to mate-worthiness.

One of the great contributions of the book is the clear—and insistent—citation of metaphor as a root capacity of understanding and perception. Although previously understood by Hillman (1975), the essential nature of metaphor and specific metaphorical structures are significantly expanded upon by Goodwyn. Drawing on the crucial work of Lakoff and Johnson (1980), he makes a solid argument that understanding grows metaphorically from certain root, universal, and, yes, archetypal uniformities of embodied experience. Feeling-toned linkages are made much more accessible when understood as the foundation of metaphorical extension. Eschewing the orthodox language of archetypes as autochthonously arising across cultures (Jung, 1968), Goodwyn points to the universality of navigating an evolutionary landscape that selectively has embedded certain kinds of perceptions and impressions into our response preferences and, by extension, our minds.

This is not a perfect book by any means. In his treatment of dreams and dreaming, the author seems to rely heavily on the traditional Jungian interpretation without a real appreciation of how it is reinforced by insights from neuroscience and the process of memory consolidation. Nielsen and Stenstrom (2005) confirmed the emotional organization of dreams and their general lack of episodic content. In addition, Payne and Nadel (2004)

indicated that memory consolidation proceeds differently in REM and non-REM sleep, and they suggested that episodic content is more fully present in early non-REM sleep than in later REM sleep.

This suggests not only that dreams may be organized archetypally (emotionally) but also that, as the night goes on, under the influence of increased cortisol levels, episodic content becomes less pronounced and the archetypal–emotional themes that underlie dreaming are reasserted, clothed in the content of recent experience. In this case, it appears that both processes proceed in parallel without contradiction.

Another problem in the book is the author's enantiodromal sway between the verge of seeing archetypes as inherited images and the more likely formulation of the archetypes as dispositions to perceive and act. A more solidly ethological explanation would have been more satisfying, but this is not crucial. Goodwyn does not set out to exhaustively examine the nexus between Jung and neuroscience but to create bridges between what have been until recently separate worlds. This he does well.

The Neurobiology of the Gods is not a highly technical book. It is integrative and explains a great deal for people who have been perplexed by the difficulty of the Jungian corpus. Importantly, it lays a groundwork that might inspire other readers, both technical and nontechnical, to take a look at Jung as someone who built up astonishingly current concepts while living in a world that is now two centuries gone.

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