Emergence and Semiotics – a Primer

In the previous chapter, I did not specifically couch my account of religion using explicit emergence and semiotic categories and terms. In this chapter, my goal is to make clear what I believe is ‘state-of-the-art’ emergence theorizing, in order to gain the perspective necessary to distinguish an emergent approach to the study of religion from other naturalistic theories of religion that have appeared recently (D.S. Wilson’s *Darwin’s Cathedral* and Daniel Dennett’s *Breaking the Spell* will be used later in this book as sophisticated representative examples).

I will primarily be utilizing the recent work of Terrence Deacon as he draws on the thought of philosopher C.S. Peirce; but I will also investigate three complementary ideas relevant to the discussion: J.L. Austin’s *performative utterances*, Howard Pattee’s *semantic closure*, and Douglas Hofstadter’s *strange loops*. As a result of this chapter, we should have tools to better understand the dynamic relationship between the mnemonic function of *myth and ritual*; the robust, adaptive, and long-lived persistence of religious *communities*; and the meaningful *transformative experiences* and altered states of consciousness religious communities cultivate in individuals.

Emergent Systems

Terrence Deacon¹ has been one of the ablest recent expositors of emergence theory, a theoretical approach that has roots going back at least to John Stuart Mill, and addresses issues that have been discovered and re-discovered a number of times in the past 150 years.² In this section, I will outline the key features of Deacon’s theory, to be followed by a similar look at semiotics.

¹ In this section I will be chiefly drawing on Deacon’s earlier papers on emergence (Deacon 2006; Goodenough and Deacon 2003; Deacon 2003a; Deacon 2003b; Weber and Deacon 2000; Deacon and Sherman 2007; Goodenough and Deacon 2006; Deacon 2000; Deacon, Cashman, and Sherman 2006; Sherman and Deacon 2007), where he attempts to describe the categories necessary for understanding the phenomenon, and his recent book, *Incomplete Nature* (2012), which addresses fundamental issues in emergence theory in a much deeper way.

² See Clayton (2006), McLaughlin (1992), and Juarrero (2010) for a history of emergence theory. Issues related to emergence are also discussed in the fields of cybernetics, philosophy of mind, and dynamic systems theory, and in the study of complex adaptive systems, group selection, and superorganisms.
**Emergence Complements Reduction**

In Deacon's hands, emergence is not a new ‘field’ of the sciences, nor does it introduce new forces or entities into established scientific fields. It is more like a metaphor change, a change in perspective that draws attention to problems previously ignored, and asks questions previously unasked. The metaphor change suggested by emergence allows Deacon to ask how it is that the entities and processes investigated in physics can be organized into living organisms exhibiting functional adaptation, and into human persons who can engage the natural world with intelligence and intentionality. Deacon's version of emergence draws attention to organization rather than to component parts, and tries to account for the increase in organization exhibited over time by some systems, particularly those that manifest self-serving organizational dynamics.

Emergence theory emphasizes certain aspects of phenomena usually ignored by reductionist approaches. Deacon suggests what a few of these aspects are:

- While reductionist approaches give us a ‘cast of characters’ that make up all phenomena, characterizing parts and their potential for interaction, emergence approaches focus on how contextual *relations* between aggregates of component parts and external objects matters to what happens across larger spans of space, time, and referential fields.

- Reductionist approaches give us the basic physical laws describing cause and effect that apply to all parts everywhere; emergence approaches focus on novel *arrangements* of causality which sometimes appear, without invoking unprecedented physical laws. Emergence is the attempt to tell the story of how *matter/energy* and *form* interact to produce complexity, function, and intentionality across the ‘hierarchy of the sciences’ – from physics, to chemistry, to biology, etc. Emergence approaches acknowledge that what is known at any lower level science *underdetermines* what would count as knowledge to a higher-level science. To know *that* the theoretical entities of a higher level science are made up of the theoretical entities taken from a lower level science (which reductionism as a strategy demonstrates) does not give an account of *what specifically* characterizes the way those characters interact at a higher level, and why.

- Reductionist approaches focus on parts in isolation, what they are intrinsically. Emergence approaches focus on how those parts interact causally in systems, and are often reflected in “research paradigms sensitive to systemic factors” (Deacon 2003b). Systemic emergent effects are often the most critical causal processes behind phenomena to be explained.

- Reductionist approaches are concerned with the specific material composition and causal processes underlying a particular phenomenon;