

Psychology and Religion

with Daniel A. Helminiak, “*Theistic Psychology and Psychotherapy*”; Kevin S. Reimer et al., “*Varieties of Religious Cognition*”; John A. Teske, “*Narrative and Meaning in Science and Religion*”

NARRATIVE AND MEANING IN SCIENCE AND RELIGION

by John A. Teske

Abstract. Differences of understanding in science and in religion can be explored via the distinction between paradigmatic and narrative modes of explanation. Although science is inclusive of the paradigmatic, I propose that in explaining the behavior of complex adaptive systems, and in the human sciences in particular, narratives may well constitute the best scientific explanations. Causal relationships may be embedded within, and expressions of higher-order constraints provided by, complex system dynamics, best understood via the temporal organization of intentionalities that constitute narrative. Complex adaptive systems, out of which intentions emerge, have behavioral trajectories that are in principle unique, contingent, and nondeterministic even in stable states and unpredictable across phase transitions. Given such unpredictability, the only explanation can be an interpretive story that retrospectively retraces the actual changes in dynamics. Without narrative, personality traits and human actions are incomprehensible. Such phenomena do not permit a reduction of purposive acts to nonpurposive elements or of reasons to the causes they constrain. Causality does not exhaust meaning. Given the role of narratives in human lives, religion and mythology provide larger stories within which individual stories make sense. Differences between narrative and historical truth suggest how we can be constituted by what we imagine ourselves to be.

Keywords: causality; complex adaptive system; context-sensitive constraint; explanation; hermeneutic; history; intentionality; meaning; narrative

John A. Teske is a professor of psychology at Elizabethtown College, Elizabethtown, PA 17022; e-mail teskeja@etown.edu.

[*Zygon*, vol. 45, no. 1 (March 2010)]

© 2010 by John A. Teske and the Joint Publication Board of *Zygon*. ISSN 0591-2385

www.zygonjournal.org

I will tell you something about stories . . .
 They aren't just entertainment.
 Don't be fooled.
 They are all we have, you see,
 all we have to fight off
 illness and death. —Leslie Marmon Silko (1977, 2)

One of the ways to distinguish between understanding in science and in religion is provided by Jerome Bruner's (1986; 1990) distinction between paradigmatic and narrative modes of understanding. The paradigmatic mode involves synchronic understanding via logical proof, empirical observation, and causal explanation and is putatively more characteristic of science. The narrative mode involves diachronic understanding via storied accounts of the "vicissitudes of human intentions" (1986, 16) organized in time, explanations being not causal but in terms of believable narratives of actors—human and otherwise—striving to do things over time. The latter mode is more characteristic of novelists or poets than of scientists or logicians and arguably more characteristic of religion. That religion is about propositional beliefs is a canard regularly put forth by antireligious polemicists attempting to cast religion as paradigmatically defective, such as Richard Dawkins (2006), Daniel Dennett (2006), Sam Harris (2004), and Christopher Hitchens (2007). Owen Flanagan recently pointed out, however, that religious views can cause the difficulty for themselves (and for any who are not on board with their particular tradition) when they assert that their story is true and authoritative. Even agnosticism puts itself in epistemic difficulty "since it treats theistic claims as assertions, as truth functional, but ones where the evidence is insufficient to decide which assertion to make. But theistic claims are sayings, not assertions, and thus questions about their evidentiary status can't really sensibly arise" (Flanagan 2007, 257–58 n. 2). If religious views are understood or expressed as stories, the epistemology is less problematic.

That religion is not centrally about paradigmatic claims is an idea supported by theologians and religious scholars at least since Rudolf Bultmann (1958) and Reinhold Niebuhr (1949), including more recent accounts such as that of Karen Armstrong (1993) and even contemporary Muslim scholars such as Reza Aslan (2005). The latter argues that factual questions are irrelevant, that no evangelist would have been at all concerned with recording objective observations of historical events. Although there also may be principles and propositions about religious concepts, it is a mistake to pretend that religion provides an alternative explanatory account of the natural phenomena with which science concerns itself. The questions that matter are about what the stories of a religion mean. Even the paradigmatic accounts of science itself require a wider framework in which those accounts can be said to have meaning or sense for human life.

The present thesis takes a narrative view of religion as presumptive background but asserts that, although science is necessarily inclusive of the paradigmatic because attention to reasoned analyses and empirical observations are important to establishing causal explanations, the paradigmatic mode ultimately is insufficient for many explanatory scientific accounts to be rendered comprehensible even on scientific grounds. This is likely to be true in the historical sciences (which include evolutionary biology) generally, in explaining the behavior of complex adaptive systems, and in the human sciences particularly, in which stories may well constitute the best scientific explanations. These are explanations in which causal relationships may be embedded within and expressions of higher-order systemic constraints provided by complex system dynamics, best understood via the temporal organization of intentionalities that constitute narrative.

Philosophers of science have been pointing out for decades that the received nomological-deductive, covering law model of science is inadequate to account for human behavior (for example, Cummins 1983) and perhaps living things in general, as the progressive elimination of time and context ignores the central role that time and context play for living things. Standard physical explanations tend to assume closed, isolated, near-equilibrium systems, and those explanations run into difficulties with open-ended, dissipative, nonequilibrium systems. A different logic of explanation is required for historical, contextually embedded processes, including human actions. Here many of the causal mechanisms operate between levels of hierarchical organization, manifesting as context-sensitive constraints, and are capable of producing novel and surprising emergent properties (Juarrero 1999).

In the case of specifically human actions, our intentions, consciousness, and meaning are manifested by the brain's self-organizing dynamics, which initiate, control, and constrain the causalities of organismic behavior. Alicia Juarrero provides an account of intentionality in which the brain's distributed dynamics "originate, regulate, and constrain skeleto-muscular processes, such that the resulting behavior 'satisfies the meaningful content' embodied in the complex dynamics from which it was issued . . . [providing] continuous, ongoing control and direction by modifying in real time the probability distributions of lower level neurological processes" (1999, 8). Covering law models are inadequate because the precise pathways that will be taken by complex adaptive systems are ineradicably unpredictable. Such systems, out of which intentions emerge, have behavioral trajectories that are in principle unique, contingent, and nondeterministic even in stable states, and unpredictable across the bifurcations that can eventuate in phase transitions or more catastrophic transformations (conversions or other life-changing events). Given such unpredictability, the only explanation can be an historical, interpretive story that retrospectively retraces the actual changes in dynamics, including their embedding in a historical and

structured environment (including external symbolic technologies; see Clark 2003; Donald 2002). In open systems, embedded by feedback in context and history, their distinctive character and behavior will embody the sedimentation of the contingencies and idiosyncrasies experienced over history and development. There is a difference, of course, between the story one might tell about the changes in dynamics of a complex adaptive system and the stories that human beings, of necessity, tell about *themselves* that may play an integral role in the very constitution of meaningful lives through time. So we also must tell a story about the storytelling itself.

According to Juarrero (1999), without narrative, personality traits and human actions are incomprehensible, so it becomes necessary to explain human actions using a hermeneutic, narrative model, much as is the case with other interpretive understandings. For example, the overall meaning of a text is constructed out of the interrelations between individual passages as, in turn, the meaning of individual passages depends on the larger text in which they are embedded. A nomological-deductive, covering law model may be adequate only for atemporal, acontextual, isolated, linear phenomena. For complex, dynamic phenomena, context-dependent constraints progressively individuate and mark them as historical, embodying within their structure the conditions under which they were created and by which they have been transformed. For such systems, sensitive to initial constraints, irregularities, and fluctuations and capable of dramatic divergences, interpretation is always required, and the meaning of events can be fully understood only in the context of the higher-level constraints that govern them. We can understand human motoric behavior only in the context of the intentions they serve (or fail to serve). For phenomena that are essentially contextual and historical, the logic of explanation must be hermeneutic rather than deductive, involving an interpretive circle that runs from parts to wholes and back again, not a reduction of purposive acts to nonpurposive elements, of reasons to the causes that they constrain. Causality does not exhaust meaning. Narratives are not an alternative opposed to scientific naturalism but the context within which such accounts must be understood if they are to have any meaning at all.

Juarrero ultimately suggests that “the current revival of interest in myth, the tales of Genesis, and storytelling in general is not unrelated to the perceived inadequacies of the received logic of explanation that modern philosophy and science has offered to the public at large” (1999, 241). In providing concrete, contextual, temporally grounded recreations of the open, nonlinear dynamics of real processes, including their historical embeddedness, such narratives respect our sense of place and the importance of a particular point of view rooted in space and time. Human persons and their actions simply cannot be understood via Thomas Nagel’s (1989) classic scientific “view from nowhere,” because it is precisely their point of view that makes them comprehensible. Appealing to explanation as being

prooflike, or definitional, rather than narrative is to remove both time and contingency. In contrast, the temporal and contextual form of narrative, particularly in its mythic form, “In the beginning . . . ,” treats time and place as ontologically real and recognizes the epistemic role of such connections. According to Umberto Eco (1990), the meaning of a narrative can be understood only in time and context. Stories explain, make events comprehensible, and make events meaningful via their richness of description, showing the warp and weave of multiple connections in time and context, the very fabric of being for particular events. To banish time and context is to banish individuality. Meaningful explanation of human action is therefore necessarily genealogical, storylike, and richly contextual (Juarrero 1999).

What are the implications of this logic of explanation for the relationship between religion, ideology, mythology, and science, particularly human science? Philosophers since Franz Brentano ([1874] 1970) have argued about the irreducibility of intentional language, an “intentional stance” over and above a physical or even a more functionalist design stance (Dennett 1987). That is, over and above asking causal questions about how something is made up or how it came to be, or design questions about its role or function in some larger system (already a question about ends served), we account for human actions in terms of the beliefs and desires of human agents and the intentional human ends that those actions serve. We also ask larger questions of meaning in terms of broader agencies, be they human communities or what we take to be sacred or divine. In some sense this *is* what we mean by *meaning* (Steiner 1989). This is not an account that is alternative or opposed to physicality or design but an additional requirement for comprehensibility, for meaningfulness.

None of this is to say that our physicality, our evolution, our history, or our individual development does not help us to understand how it is that we become able to undertake intentional, meaningful action, but it does not exhaust *that* or *how* we do it. In the past generation much progress has been made in such understanding, often by comparing the contrasting designs and surprising incapacities and dissociations present in artificially intelligent systems, animals, infants and children, and the neurologically impaired. Indeed, it is our physicality and our evolutionary design that makes it possible for us to compute the “social exchange algorithms that define a social world, of agents, benefits, requirements, contingency, and cheating” (Baron-Cohen 1995, xiii), and that is necessary to realize these functional and informational relationships. What does it *mean* that John walked out to his mailbox, inserted a key, opened it, looked inside, then closed it and walked back? We understand these actions in terms of the intentional states we attribute to John: that he *thought* the mail might be there, *wanted* to retrieve it, found it absent, and, perhaps, felt *disappointment* at this *knowledge*. We tell a story by stringing together descriptions of

these intentional states in ways that make sense in terms of our folk psychology, and although there may be some species-wide universals rooted in the coevolution of neocortical size, group size, and language in our Pleistocene past, the biological roots of these capacities also enable the cortical and developmental plasticity that may be shaped differently by socialization across different ecologies, cultures, and histories (Deacon 1997). It is not clear how we could say that meaning even existed in the universe prior to the existence of such intentional states except to the extent that we read it into the intentionalities of agencies in our prehuman past. Need such stories be true or empirically verifiable? It is unclear how one could ever tell, nor might it matter, except to the extent that such stories affect how we make sense of ourselves and our actions *now*, or how they have been made sense of by other historical human agents. Alternately, although we may be able to verify physical accounts or even accounts dependent upon design (evolutionary or otherwise), it is only by virtue of a narrative, composed of intentionalities, that we find them meaningful.

It may well be a product of the evolution of our social intelligence that we can construct such narratives, which invariably include anticipating the consequences of our behavior and the likely behavior of others, in a context in which the physical evidence is rapidly shifting, ambiguous, and also can change as a consequence of one's own actions, and in interaction with others equally capable of such constructions (Humphrey 1984). As philosophers of language (Searle 1969, for example) have pointed out, the very meaning of linguistic (and probably nonlinguistic) communication is apprehended only by the attributions of a speaker's intentional states. Hence, narrative sequences of attributed intents are essential to the construction of meaningful lives. Much of my own recent work has been dedicated to exploring the religious implications of the role of such narratives in our lives, our consciousness, memory, identity, morality, and meaning itself.

In a previous article in these pages on "Neuropsychology: Brains and Stories" (Teske 2006) I summarized much of my earlier work and began to sketch a more comprehensive overview of how personal narratives, particularly the broader mythic and religious content of human stories, so deeply engage human beings. It is a fuller narrative of our lives, our own life story, that produces our sense of identity and self, our personal history, our wounds received and inflicted, our attempts to shape and be shaped by others spiritually, intellectually, and emotionally, down to our deeply embodied physical existence. I believe that the functions involved in constructing and in responding to stories, memory, attention, emotional marking, and temporal sequencing, and the neurological events that support them, the product of an evolutionary hypertrophy of the prefrontal cortex, are integrated and made coherent by the cultural invention of myth and story. The narrative structuring of higher cognitive functioning enables

the construction of meaning, relationship, morality, and a cognizance of the purposes that extend beyond individual boundaries. This shapes our neural affect system and the dynamic narratives by which we construct selves and relationships (two sides of the same coin). Of necessity, and by socialization, the particular narrative forms and themes are drawn from culturally available myths and stories, our experience colored by the larger stories within which we try to interpret and make sense of our lives. As Charles Taylor (1989) indicated, narrative constitutes our movement in a moral space, our striving after valued goals and ends, and the vicissitudes of the conflicts and struggles that we meet, and create, along the way.

Although I do not review here the evidence for such a neuromythological view, it is important to recognize that it includes the evidence for a neural substrate for narrative selves and a subcortical mediation of motivated and emotional experience by which stories sustain their felt significance, by which they move us. It includes a subcortical “replaying” of sequenced events by which the narrative formulation may be central both to declarative memory of those events and to any ability to synthesize such events into diachronic representations of self, other, and relationship. The shaping of such narrative content over the course of development can account for emotional engagement in narrative, the development of a narrative self, and the differentiated embedding of human meaning and individual identity in broader narratives, metanarratives, mythologies, and ideological and religious systems. The tension, climax, and denouement of narrative make it compelling and may also be what make it memorable; we encode events in story form in order to better remember them. Infantile amnesia and the rapid loss of unreported dreams, unattended disjoint events, or traumatic sequences all may be understood better via a model, building from long-term neural potentiation, reactivation, the relationship between arousal and memory, and the rehearsal and retelling of stories. This model suggests that human memory, particularly of personally relevant episodic events, may depend heavily on narrative form, the arousal-producing qualities of narrative tension, conflict, and resolution, and their intentional goals and purposes. Objective events do not occur in storied form; the same set of events can be attended, selected, emphasized, and ordered into quite different stories, just as I can tell a story of my academic career as a series of heroic accomplishments or of tragic accidents.

Erik Erikson, an important theorist of modern identity, equates adulthood with an identity constructed in terms of a life story:

To be an adult means among other things to see one's own life in continuous perspective, both in retrospect and prospect. By accepting some definition of who he is, usually on the basis of a function in an economy, a place in a sequence of generations, and a status in the structure of society, the adult is able to selectively reconstruct his past in such a way that, step for step, it seems to have planned him, or better, he seems to have planned it. (1958, 111–12)

A fuller account of this theory would have to include subsequent feminist critiques and a revision of our understanding of the relationship between identity and intimacy (Gilligan 1982; Chodorow 1978), but this means that becoming an adult involves a reconstruction of the past in a way that leads to the present. Although this does not falsify the past, it must use fictional and imaginative power to “make sense” of the facts as we remember them. We can understand this as a way of making ourselves intelligible by accounting for behavior in terms of intentionality, rationalizing it in the form of a life story (Slugoski and Ginsburg 1989). “Narrative makes sense of a brain’s own behavior, and may underlie the sense of a unitary self” (Roser and Gazzaniga 2004). For Anthony Giddens (1991), a person’s identity is constituted by keeping a particular narrative going.

Dan P. McAdams’s research on the narrative construction of self (1985; 1993; 2005) suggests that we make a life by making a story. We explain important parts of ourselves by telling stories, shared in intimate conversation, internalized and evolving, imbuing our lives with meaning and purpose. Stories also create a shared history, linking people in time and events, an unfolding drama that is made more in the telling than in the events themselves. As Alasdair MacIntyre (1984) suggests, our very notion of the good is understood in the context of narrative. What is good for the individual is what contributes to the completion of a life story; what is good for humankind is then understood in terms of features common to all life stories. McAdams (2005) presents evidence that in the context of American culture it is the redemptive sequence of stories about fear, loss, sadness, and guilt leading to joy and excitement that sustains hope and commitment, stories that often are tied explicitly to religion. Clearly, we may need an eschatology to provide prospective components that are beyond the life of the individual.

Collections of the broader mythologies and religious stories of a culture provide a unifying context for surviving crises, finding roots, fixing memories, and self-discovery. Our lives can be meaningful only to the extent that they express culturally meaningful stories. Heroic stories of defeat and victory, contamination and redemption, exile and homecoming, or romantic stories of alienation and reunion, betrayal and forgiveness, sacrifice and bliss can provide a meaningful integration of scattered, dissociated, painful, and otherwise uncontrolled images and emotional responses into coherent form. Moreover, in doing so, they actually can provide psychological healing for sufferers of posttraumatic stress (Shay 1994) or even improved physical health in college students (Pennebaker 1989; 1997). The emergence of a narrative self, our narratives shaped within a cultural history of mythic and religious forms, provides a compelling set of explanatory and meaning-engendering purposes important to bridging scientific and religious understandings of human lives (Teske 2006).

Let us be clear: Religions' attempts to make paradigmatic claims are either not likely to be testable or, where they oppose naturalistic accounts provided by science, likely to be wrong. In any case, it is the narrative, diachronic framework for such claims in which they have sense or meaning. Science provides us with a paradigmatic, synchronic description of objects or events; it does not provide meaning. It is the framework into which such descriptions are placed that does—frameworks that science does not provide, including the scientific faith that the world can be understood and made sense of at all. In the case of human beings (and other complex adaptive systems), the standard paradigmatic account may be insufficient even on a scientific basis, because a full understanding of such beings requires a diachronic, narrative account. These are not *alternative* to naturalistic accounts but the narrative in which such accounts must be understood if they are ultimately to make sense. We can certainly study human beings, and even religions, as natural phenomena, but that will not exhaust what they are. This is not to posit some additional supernatural components but only to argue that standard paradigmatic, causal accounts of events do not exhaust the kinds of relationships between them.

In living beings, narrative accounts are likely to be prospective as well as retrospective. Repeatable events enable predictive prospection; unrepeatable, novel, creative, emergent events do not. One of the limitations of the “human sciences” is that, as MacIntyre (1984) pointed out, they can finally only be about the past, which is one reason why they are notoriously poor at predicting novel historical events, from the fall of Soviet Communism to the emergence of the World Wide Web—hence the need for the understandings of history, philosophy, mythology, and theology to provide the prospective futures into which human beings can live. We must realize that our finitude, even as a species, always leaves us with unanswered mysteries, unpredictable futures, a natural world that is metaphysically ungrounded, and an inevitable horizon of subjectivity (Rahner 1969) beyond which our understanding may be only apophatic or beatific. There may be unanswerable existential questions that need believable answers in order for us to live meaningful lives and for there to be a human future at all. It may be that a broader theological and eschatological framework becomes necessary for stories that extend prospectively into a future that is other than a repeatable past. Despite my own deep disbelief in the dogmatics of most of my own faith tradition, I confess an incapacity to understand my life without the concepts of sin, grace, redemption, resurrection, sacrifice, and compassion and the acceptance of bodily and emotional suffering.

Jean-Paul Sartre (1965) notoriously described the self as a true novel and argued that because contemporary religious and social institutions no longer provide the myths with which we can identify, we are faced with seeking truth and meaning by creating our own myths about ourselves. I do think it is true, as the existentialists would have it, that we need to make

the myths our own for them to make our lives meaningful, but the task of constructing the future of a people, a culture, or a species is not an individual one. We also tell and write stories of relationships, families, communities, and wider human futures, and we do much of this collaboratively. Indeed, we do so within the context of long historical traditions, many of which are religious. To paraphrase MacIntyre (2006), it may only be in the light afforded by religious and theological doctrines concerning human nature and the human condition that we can really address the questions that ought to be central to us all, secular or not—not because of any particular answers that these doctrines provide but because of their way of addressing the questions. These are, finally, eschatological questions about the ultimate meaning and fate of our lives, and only faith provides the assurance that such meaning exists at all.

Stories may play essential roles in memory, consciousness, and meaning, but they really do so only when we make them our own; otherwise a meaning is someone else's, not ours. As Antonio Damasio (1999) points out, consciousness may well begin with the power to tell a story with words, our particularly human consciousness being constituted by taking the position of a narrator. That means identifying with characters and taking our own unique perspectives as authors and sometimes (but not always) agents in the stories that make up our lives. The complexities, variations, and contingencies involved, to say nothing of the necessary substrate of our own feeling bodies, permit no other recourse. Religions require making stories our own, at greater “degrees of interiorization of the spiritual dynamics,” as Wolfhart Pannenberg put it ([1982] 1993), the events of our lives making sense only within the moral landscape of stories within which the vicissitudes of our intentions and those of others play out. That they are from particular points of view is a central characteristic of story and what is necessarily absent in nomological science. Nevertheless, our own stories are understood by their place in larger and more inclusive stories, in the processes by which we construct meaningful lives, narratives being constituted of movement in moral space, particularly in stories of healing and redemption (McAdams 2005). Religion and mythology are what provide the larger stories within which individual stories make sense and without which they cannot.

I already indicated that to the extent that external, objective events do not occur in story form, narratives are, from a paradigmatic point of view, always fabrications and to that extent are always fictional. Stories may include actual events, of course, or fail to do so, and there is a facticity that constrains truth-telling in stories. But a story can be true to the facts and still fail to mean much, not be very memorable, and not, in that sense, be true to meaning. Narrative theorists, clinical psychologists, and for that matter literary critics share a view that stories are not a record of facts (though they may record facts), that they are less about facts than about

meaning, and that a past, from a particular point of view, is always constructed in the telling. As a result, we judge stories not by their adherence to empirical fact but by narrative criteria such as coherence, openness, credibility, and integration. Donald Spence (1982) distinguishes between narrative truth and historical truth, where narrative truth is not the truth of logic, science, and empirical demonstration but something more like verisimilitude. Despite the necessary attention to facticity of a good historian, if what I am saying is correct—that the historical sciences (to say nothing of history itself) cannot make sense of the behavior of complex adaptive systems in general and of human action in particular without attention to narrative—perhaps it would be safer to use the distinction made by novelist Tim O’Brien, in a collection of stories about the war in Vietnam (1990), who distinguishes between *story truth* and *happening truth*.

O’Brien’s largely first-person accounts of a soldier coping with combat in Vietnam are moving and effective, so much so that many veterans reading his stories find them to be “healing,” as reported by a psychiatrist treating posttraumatic stress in Vietnam veterans (Shay 1994). But at the end of the book O’Brien confesses that although he was there, walking through the jungles, everything else is invented. One of the most fascinating stories is titled “The Man I Killed.” The story is full of guilt, obsessive reverie, adrenaline-induced time dilation, and the incoherence of fragmentary impressions as the narrator tries to make sense of a fresh corpse as he sits on the side of the trail. O’Brien tells the reader that he is inventing himself and that although he did not actually kill the man, he was there, could form a vivid image of a face of a man with a jaw in his throat, and he also shared the guilt, because of his presence. Then he confesses that even *that* is invented. “I want you to feel what I felt. I want you to know why story truth is truer sometimes than happening truth” (1990, 203). The happening truth was that he was young, in a world of many dead bodies with many faces, but he was afraid to look—and was left twenty years later with “faceless responsibility and faceless grief.” His stories make things present both for himself and for his readers and allow him and them to look at things, to attach faces to “grief and love and pity and God,” and be able to feel again. So, when his daughter asks him if he ever killed anyone in the war he can say honestly “Of course not.” Or, honestly, “Yes.”

Story truth is not about providing external descriptions of the world to be judged by their veridicality. As Bruno Bettelheim says in his analysis of the psychological power of fairy tales (1977), they can help us deal with grief, loss, and fear by giving us models of how to make sense of them. Robert Coles in his work on the moral imagination (1989) highlights the integrative functions of stories in healing what is sick or broken, bringing together what is shattered, helping us cope with stress, and moving us toward fulfillment and maturity—functions for which paradigmatic, *happening truth* is woefully inadequate. I think that mythology and religion

can be far better understood by viewing them in terms of narrative truth, as products of the imagination, as symbolic (though we too easily forget this), as ways of organizing the cold hard facts of the world into meaningful and symbolic narratives rather than operating as if the cold hard facts are all that existence is *about*. They can be *all there is* (although it is remarkably arrogant, even strange, given the history of science, to presume that there isn't still a lot we do not know about) without being *what they mean*. Nobody argues with the claim that not everything can be expressed scientifically. This is not to say that we cannot or should not provide scientific, causal accounts of art, music, poetry, literature, and religious experiences; they need not involve magical or mysterious powers. But what they express is not expressed scientifically. "The arts work our imaginations with all the playful tricks of language, allegory, metaphor, and metonymy that science, for its purposes, doesn't much care for" (Flanagan 2002, 23).

Finally, I think, we are also truly and really as much constituted by what we imagine ourselves to be, whether prospective or fictional. I agree with Ted Laursen that it is in their imaginative projections that the religions or mythological systems of the world make it possible to address our "perceptions of separateness" and "the brute facts of individual desire, suffering and death" (2007, 813). "Why find an end in the narrative self if there is no point to the narrative?" (p. 814) We cannot learn what ends to project merely by looking at the *happening truth* of science. Possibilities *are* constrained by facts, and the more we know about the facts, the more realistic our projection of possibilities might be, but it takes imagination, not science, to invent those possibilities. "Religion is part of our dream of possibilities; its study provides a lens for the observation of many aspects of what the human enterprise is and can be about, of explorations of what it might mean to have different notions of ourselves, and why it might matter if we did" (p. 814). As long as we are alive, our stories are not complete, their meanings always and necessarily prospective. When we shuffle off this mortal coil, they are no longer ours to tell but parts of other people's stories, as they are ours—all parts of a larger story in which, as only faith teaches us, our lives will have meant something, which is finally not ours to determine.

NOTE

A version of this article was presented at the 12th European Conference on Science and Theology, Sigtuna, Sweden, 30 April–4 May 2008. A version also appears with permission in *How Do We Know? Understanding in Science and Theology*, ed. D. Evers et al. (London and New York: T&T Clark, 2010), 187–99.

REFERENCES

- Armstrong, Karen. 1993. *A History of God*. New York: Ballantine.
- Aslan, Reza. 2005. *No god but God*. New York: Random House.
- Baron-Cohen, Simon. 1995. *Mindblindness*. Cambridge: MIT Press.
- Bettelheim, Bruno. 1977. *The Uses of Enchantment: The Meaning and Importance of Fairy Tales*. New York: Vintage Books.
- Brentano, Franz. [1874] 1970. *Psychology from an Empirical Standpoint*. Ed. O. Kraus. London: Routledge and Kegan Paul.
- Bruner, Jerome S. 1986. *Actual Minds, Possible Worlds*. Cambridge: Harvard Univ. Press.
- . 1990. *Acts of Meaning*. Cambridge: Harvard Univ. Press.
- Bultmann, Rudolf. 1958. *Jesus Christ and Mythology*. New York: Scribner's.
- Chodorow, Nancy. 1978. *The Reproduction of Mothering*. Berkeley: Univ. of California Press.
- Clark, Andy. 2003. *Natural-Born Cyborgs*. New York: Oxford Univ. Press.
- Coles, Robert. 1989. *The Call of Stories: Teaching and the Moral Imagination*. Boston: Houghton Mifflin.
- Cummins, Robert. 1983. *The Nature of Psychological Explanation*. Cambridge: MIT Press.
- Damasio, Antonio. 1999. *The Feeling of What Happens*. Orlando, Fla.: Harcourt.
- Dawkins, Richard. 2006. *The God Delusion*. New York: Houghton Mifflin.
- Deacon, Terrence W. 1997. *The Symbolic Species*. New York: Norton.
- Dennett, Daniel. 1987. *The Intentional Stance*. Cambridge: MIT Press.
- . 2006. *Breaking the Spell*. New York: Viking.
- Donald, Merlin. 2002. *A Mind So Rare*. New York: Norton.
- Eco, Umberto. 1990. *The Limits of Interpretation*. Bloomington: Indiana Univ. Press.
- Erikson, Erik H. 1958. *Young Man Luther*. New York: Norton.
- Flanagan, Owen. 2002. *The Problem of the Soul*. New York: Basic Books.
- . 2007. *The Really Hard Problem*. Cambridge: MIT Press.
- Giddens, Anthony. 1991. *Modernity and Self-Identity*. Stanford, Calif.: Stanford Univ. Press.
- Gilligan, Carol A. 1982. *In a Different Voice*. Cambridge: Harvard Univ. Press.
- Harris, Sam. 2004. *The End of Faith*. New York: Norton.
- Hitchens, Christopher. 2007. *God Is Not Great*. New York: Twelve.
- Humphrey, Nicholas. 1984. *Consciousness Regained*. New York: Oxford Univ. Press.
- Juarrero, Alicia. 1999. *Dynamics in Action*. Cambridge: MIT Press.
- Laurenson, Edwin C. 2007. "Persons and Dreams of Possibility in Religion and Science." *Zygon: Journal of Religion and Science* 42:813–15.
- McAdams, Dan P. 1985. *Power, Intimacy, and the Life Story*. New York: Guilford.
- . 1993. *The Stories We Live By*. New York: William Morrow.
- . 2005. *The Redemptive Self*. New York: Oxford Univ. Press.
- MacIntyre, Alasdair. 1984. *After Virtue*. Notre Dame, Ind.: Notre Dame Univ. Press.
- . 2006. "The End of Education: The Fragmentation of the American University." *Commonweal* 133:18, 10 (4).
- Nagel, Thomas. 1989. *The View from Nowhere*. New York: Oxford Univ. Press.
- Niebuhr, Reinhold. 1949. *Faith and History*. New York: Scribner's.
- O'Brien, Tim. 1990. *The Things They Carried*. New York: Viking Penguin.
- Pannenberg, Wolfhart. [1982] 1993. "Spirit and Mind." In *Toward a Theology of Nature: Essays on Science and Faith*, ed. Ted Peters, 148–61. Louisville, Ky.: Westminster John Knox.
- Pennebaker, James W. 1989. "Confession, Inhibition, and Disease." In *Advances in Experimental Social Psychology*, vol. 22, ed. L. Berkowitz, 211–44. New York: Academic Press.
- . 1997. "Writing about Emotional Experiences as a Therapeutic Process." *Psychological Science* 8:162–66.
- Rahner, Karl. 1969. *Hearers of the Word*. Trans. Michael Richards. New York: Herder and Herder.
- Roser, M., and Michael S. Gazzaniga. 2004. "Automatic Brains—Interpretive Minds." *Current Directions in Psychological Science* 13:56–59.
- Sartre, Jean-Paul. 1965. *Essays in Existentialism*. Seacausus, N.J.: Citadel.
- Searle, John. 1969. *Speech Acts: An Essay in the Philosophy of Language*. New York: Cambridge Univ. Press.

- Shay, Jonathan. 1994. *Achilles in Vietnam*. New York: Simon and Schuster.
- Silko, Leslie Marmon. 1977. *Ceremony*. New York: Viking.
- Slugoski, B. R., and G. P. Ginsberg. 1989. "Ego Identity and Explanatory Speech." In *Texts of Identity*, ed. John Shotter and Kenneth J. Gergen, 36–55. Newbury Park, Calif.: Sage.
- Spence, Donald. 1982. *Narrative Truth and Historical Truth*. New York: Norton.
- Steiner, George. 1989. *Real Presences*. Chicago: Univ. of Chicago Press.
- Teske, John A. 2006. "Neuromythology: Brains and Stories." *Zygon: Journal of Religion and Science* 41:169–96.
- Taylor, Charles. 1989. *Sources of the Self*. Carbondale: Southern Illinois Univ. Press.