

Mental Well-Being, Neuroscience, and Religion

with Gillian K. Straine and Mark Harris, "Mental Well-Being, Neuroscience, and Religion: Contributions from the Science and Religion Forum"; Fraser Watts, "Theology and Science of Mental Health and Well-Being"; Lindsay Bruce and Sarah Lane Ritchie, "The Physicalized Mind and the Gut-Brain Axis: Taking Mental Health Out of Our Heads"; Jaime Wright, "In the Beginning: The Role of Myth in Relating Religion, Brain Science, and Mental Well-Being"; William L. Atkins, "Empirical Mindfulness: Traditional Chinese Medicine and Mental Health in the Science and Religion Dialogue"; and Ben Ryan, "The Church and Mental Health: Theological and Practical Responses."

IN THE BEGINNING: THE ROLE OF MYTH IN RELATING RELIGION, BRAIN SCIENCE, AND MENTAL WELL-BEING

by Jaime Wright

Abstract. Building upon the insights of scholars attuned to story, narrative, and myth, this article explores the relationship between myth, science, and religion. After clarifying the interplay of the three terms—*story*, *narrative*, and *myth*—and the preference for the term *myth*, this article will argue that myth can serve as a medium through which religion, neuroscience, and mental well-being interact. Such an exploration will cover the role of myths in religion, the neurological basis of myth, and the practices of narrative psychology and bibliotherapy. The article will conclude with suggestions for understanding and utilizing the relationship between myth and the scholarly study of the relationship between science and religion. This article ultimately suggests that myth can operate as a methodological aid to the science-and-religion field.

Keywords: cognitive science; healing; human nature; myth; narrative; neuroscience; psychology; religion; spirituality; story

"The sociobiological explanation of faith in God leads to the crux of the role of mythology in modern life" (Edward O. Wilson, *On Human Nature* [1978, 190]).

"What we are concerned with are models of reality—and such models are usually verbal and almost invariably narrative" (Stephen Prickett, *Narrative, Religion and Science* [2002, 71]).

Jaime Wright is a doctoral candidate at the University of Edinburgh's Divinity School, Edinburgh, UK; e-mail: wrightjaimem@gmail.com.

“[F]or all our science, rationality, and technology, we moderns are no less the makers, tellers, and believers of narrative construals of existence, history, and purpose than were our forebears at any other time in human history. But more than that, we not only continue to be animals who make stories but also animals who are *made by* our stories” (Christian Smith, *Moral, Believing Animals* [2003, 64]).

“[I]f rational explanations such as quantum physics and evolution are fully adequate explanations of our origins and our reality, why do we continue to read, create, and reformulate myths? Why have not *The Epic of Gilgamesh*, *Beowulf*, Exodus, Bhagavad Gita, *The Pilgrim’s Progress*, and the American Dream all vanished?” (Thomas Shannon, “Human Nature in a Post-Human Genome Project World” [2005, 306]).

“Religion is the ultimate expression of story’s dominion over our minds” (Thomas Gottschall, *The Storytelling Animal* ([2012, 119]).

What does one do with such statements as those listed above, when considering the relationship between science and religion? Building upon the insights of such scholars attuned to story, narrative, and myth, this article explores the relationship between myth, science, and religion. After clarifying the interplay of the three terms—*story*, *narrative*, and *myth*—and my preference for the term *myth*, I will argue that myth can serve as a medium through which religion, neuroscience, and mental well-being interact. Such an exploration will cover the role of myths in religion, the neurological basis of myth, and the theories of narrative psychology and bibliotherapy. I will conclude the article with suggestions for understanding and utilizing the relationship between myth and the scholarly study of the relationship between science and religion, which I refer to as the *science-and-religion* field.

STORY, NARRATIVE, AND MYTH

Foundational science-and-religion scholar Ian Barbour claimed in *Religion and Science: Historical and Contemporary Issues* that the role of story in religion seems to be without parallel in science (1998, 136). Going back to Barbour’s *Myth, Models and Paradigms* (1974), he explores myths only to the extent that models are embedded within them. In Barbour’s search for relations between religious and scientific language, myth fails to provide for him the direct correlations allowed for by models and paradigms. However, such dismissal of myth ignores the narrative turn in the fields of religion and science noted by literary scholar Stephen Prickett in his book *Narrative, Religion and Science* (2002), in which he argues that, because of their dependence upon narrative, both fields should be subject to the

analyses of critical theory. While Prickett's understanding of the narrative nature of religion might be easily accepted, given fields such as biblical narrative criticism and narrative theology, both of which will be discussed later in this article, the narrative nature of science, as portrayed by Prickett, may be more difficult to understand without further exhibition. Prickett introduces the notion of science-as-narrative thus:

Physics, declared Niels Bohr, father of the "Copenhagen" interpretation of quantum theory in the 1920s and 1930s, tells us not what is, but what we can *say* to each other concerning the world. There is no "scientific method" writes Jean-François Lyotard, a scientist is before anything else a person "who tells stories." This description of the scientist is echoed by John Gribbin, the physics writer, who recently commented at the end of a lengthy discussion of quantum theory, "I do not claim that it is anything more than just a fiction; all scientific models are simply Kiplingesque 'just-so' stories that give us a feeling that we understand what is going on." Startling as this might seem to the non-scientist, within their profession such views from Bohr or Gibbin are no longer controversial. Gribbin seems in fact, consciously or unconsciously, to be echoing the American biologist Stephen Jay Gould, who had used precisely the same phrase, "just-so stories"—but without mentioning Kipling—in an essay in 1991. Science, Gould claimed, was best thought of as a series of interpretative or "adaptive stories" to explain certain phenomena. (2002, 2)

My intention in sharing this extended quote from Prickett is not to directly engage with Prickett's notion of science-as-narrative, but rather to provide an understanding of his position concerning the dominance of narrative over science, such that it is the discourse of science that matters more than the practice or findings of science. Prickett himself does not attempt to defend his position, but rather assumes such an understanding in order to analyze science and religion discourse as they relate to fundamentalism and irony (following Kierkegaard's conception of the latter). Prickett provides for us, then, a counterbalance to Barbour's position on the limited role of story in science-and-religion discourse. While I would not want to advocate for Prickett's science- and religion-as-narrative position, I do wish to argue that there is more to the notion of story/myth in science-and-religion than that for which Barbour allows, due to his view of the limited application of story/myth within and to science. I am interested in acknowledging, for example, what sociologist Christian Smith, in his book *Moral, Believing Animals* (2003), describes as "the pervasiveness and centrality of narratives in the composition, direction, and interpretation of human life" (76).

An attentive reader will have already noticed the use of three related terms: *story*, *narrative*, and *myth*. It is not the intention of this article to debate the nuances in these three terms; however, as I will prioritize the term *myth* henceforth, I wish to be clear about how I am using that term. Renowned mythologist Joseph Campbell opens his book, *The Hero*

with a Thousand Faces ([1949]2008), with the following claim: “It would not be too much to say that myth is the secret opening through which the inexhaustible energies of the cosmos pour into the human cultural manifestation. Religions, philosophies, arts, the social forms of primitive and historic man, prime discoveries in science and technology, the very dreams that blister sleep, boil up from the basic, magic ring of myth” (1). Following Jungian psychology, Campbell links myth with the collective unconscious, thus imbuing myths with human ideological and therapeutic import. One must note that the term *myth*, in this sense, does not refer to falsehood. Consider also the definitions of myth given by the critical theorist Northrop Frye (1982): “[M]yth to me means, first of all, *mythos*, plot, narrative, or in general the sequential ordering of words” (31, italics original); however, “certain stories seem to have a peculiar significance: they are the stories that tell a society what is important for it to know, whether about its gods, its history, its laws, or its class structure. These stories may be called myths in a secondary sense,” such that they are “the opposite of ‘not really true’: it means being charged with a special seriousness and importance” (32–33). Thus, according to Frye, all myths are stories or narratives, but not all stories or narratives are myths. Such definitions would also be acceptable to Barbour, who claims that “[m]yths are stories which are taken to manifest some aspect of the cosmic order,” “provide a community with ways of structuring experience in the present,” “inform man [*sic*] about his [*sic*] self-identity and the framework or significance in which he [*sic*] participates,” “offer patterns for human actions today,” and “are re-enacted in rituals which integrate the community around common memories and common goals” (1974, 5). Here, Barbour articulates another dimension of myth: myths include or create space for ritual. In this way, myths may be considered dramas, rather than merely narratives (see, e.g., Murphy [2007] and Deane-Drummond [2011] on the implications of distinctions between narrative and drama). Critical theorist Donna Haraway also comments on the mythological dimensions of her theorizing, noting that it has to do with the “deep implications in narrative and storytelling practices and inhabiting stories” (Goodeve 2000, 78). Haraway’s phrase *inhabiting stories* aligns with the ritualistic space of myths, addressing what it means to live or inhabit a myth. Similar to the above scholars, renowned American science fiction author Ursula Le Guin claims that “[m]yth is an expression of one of the several ways the human being, body/psyche, perceives, understands and relates to the world” ([1976]1989, 61–62). While I acknowledge that there are nuances between the three terms—*story*, *narrative*, and *myth*—for the exploratory purpose of this article I have brought together scholars that may use only one of these terms, or may use two or three without strict definitional distinctions, as can be seen above. Accordingly, I will use the term *myth* to indicate stories or narratives of particular importance to self or society, in a manner that can engage the whole of human experience.

Further definition of the terms *story* and *narrative* used in this definition of myth are beyond the scope of this article (see Ryan [2005]2010; Sanford and Emmott 2012, 1–5). However, for our purpose here, story and narrative are intended to be understood as synonymous, and the term narrative can be understood as the sequential ordering of events such that the connection of the events is intelligible (MacIntyre [1981]1985; Ricœur 1985; Walker 2012, 64). One possible way of understanding such ordering would be the relation between narrative and time expressed by philosopher Paul Ricœur in *Time and Narrative* ([1983]1984, vol. 1) and by psychiatrist Iain McGilchrist in *The Master and His Emissary* (2009, 76, 89).

MYTH AND RELIGION

Explorations of the role of myth in religion can be found in the works of prominent religious scholars such as Edward B. Taylor's *Primitive Culture: Researches into the Development of Mythology, Philosophy Religion, Art, and Custom* ([1871]1903) and Émile Durkheim's *The Elementary Forms of Religious Life* ([1912]1995). However, the continued importance of myth in the field of religious studies today can be exhibited via any exemplary introductory anthropology of religion textbook. Such a textbook might make the following definitional statement: "Myth is, before all else, a story or narrative of a specific kind—the sacred kind, concerning the exploits of supernatural beings" (Eller 2007, 93). While such a definition is far too specific for the purposes of this article, such a textbook might also move on to discuss at length the historical influence of the theories of myth of French anthropologist Claude Lévi-Strauss (Eller 2007, 91–93). Lévi-Strauss is most famous for his role in structuralism, a cross-disciplinary method popular in the 1950s and 1960s that took inspiration from the linguist Ferdinand de Saussure (Leitch et al. [2001]2010, 1273). According to Lévi-Strauss, humans think in the form of classifications, especially binaries, which they then project onto the world (Segal [2004]2015, 100). In his article "The Structural Study of Myth," Lévi-Strauss claims that "the purpose of myth is to provide a logical model capable of overcoming a contradiction" (1955, 443). One can see, here Barbour's interest in models as they relate to myths. We will also revisit the concept of overcoming binaries in our section on brain science, below.

Claude Lévi-Strauss stands as an example, for us, of religion scholars reaching out to literary studies and linguistics in order to understand myth. An example of reaching from the opposite direction is Northrop Frye, from whom we gleaned a definition of myth provided above. That definition was published in his book *The Great Code: The Bible and Literature* (1982), which Frye intended as a textbook reflecting his influential university course on the Bible as literature. While Frye's work is largely tangential to our exploration of myths, here it is important to note his insistence upon

the connection between the Bible and literary criticism: “Many issues in critical theory today had their origin in the hermeneutic study of the Bible; many contemporary approaches to criticism are obscurely motivated by a God-is-dead syndrome that also developed out of Biblical criticism; many formulations of critical theory seem to me more defensible when applied to the Bible than they are when applied elsewhere” (1982, xix). While Frye is commenting on the limitations to taking a methodology from biblical criticism for application in literary criticism, it is a note of the link between myths, as preserved and disseminated in our literary works, and the religious text of the Christian tradition—a link that exists between myths and the texts of other religions as well.

For those approaching this exploration from the Christian tradition, more familiar may be the study of biblical narrative and narrative theology. Old Testament scholar Danna Nolan Fewell (2016) claims that narrative is “essential to our very survival” (3), for “to be human is to tell and interpret stories, to conceive of ourselves as living out and living by stories, and to see our individual stories as components of, as contributions to larger family, social, institutional, or national stories” (5). In the words of New Testament scholar Stephen D. Moore, “Narrative seeps and trickles throughout the Bible” (2016, 27). Indeed, skimming through *The Oxford Handbook of Biblical Narrative* (2016), one finds topics such as narrative identity, the sociality of narrated experience, the narration of trauma, the use of multiple stories to think with, the relation between biblical narrative and prose literature, the use of poetry within biblical narrative, cross-cultural readings of biblical narratives, the syncretization of biblical narrative with local narratives, and the relation of ethics to biblical narrative.

How stories impact humanity is a topic of interest to narrative theologians, as well, for, in the words of philosopher and narrative theologian Alasdair MacIntyre, “man [*sic*] is in his [*sic*] actions and practice, as well as in his [*sic*] fictions, essentially a story-telling animal” ([1981]1985, 216). Narrative theology can be thought of as an alternative to systematic theology, both in form and in practice. Whereas systematic theology enables the study of sub-topics—such as hamartiology, soteriology, and eschatology—in its pursuit of constructing a comprehensive worldview, narrative theology begins with an already completed and whole story. As opposed to the tenets of systematic theology, which rely on cognitive construction and assent, “[n]arrative theology is to be understood by the whole person, as members of the community and tradition in which they find themselves, and above all to be grasped through the liturgy” (Lucie-Smith 2007, 5). Consider, for example, the narrative theologian Stanley Hauerwas, for whom doing theology is living out the story of Jesus Christ in one’s own life (Hauerwas 1981; Heide 2009).

One final topic to discuss in the context of myth and religion could be vaguely called *spirituality and speculative fictions*. Speculative fiction writer

Margaret Atwood, in her nonfiction text *In Other Worlds: SF and the Human Imagination* (2011), draws a connection between religion and science fiction. She claims that they are connected to each other via myth, arguing that science fiction has subsumed “the mythic areas abandoned by literature after the meta-theological poetics of *Paradise Lost* and the meta-theological fabulations of *The Pilgrim’s Progress* and the extended theology-based other-world-building of William Blake’s long ‘prophecies’” (Atwood 2011, 55–56). Notice, here, that Atwood assumes the close connection of myth and religion, an assumption expressed by her examples of mythic-theological works. Atwood is not alone in noting the relation between science fiction and myth; Ursula Le Guin writes: “Science fiction is the mythology of the modern world” ([1976]1989, 62). Such relations become exposed as spiritually significant when considering a thesis by Emily McAvan concerning what she calls *the postmodern sacred*. According to McAvan, “The postmodern sacred . . . consists of texts that are consumed in part for their spiritual content, for an experience of the transcendent ambivalently situated on the boundary of formal religious and spiritual traditions” (2012, 6). This “attempt at accessing spirituality” uses “the symbols contained in explicitly unreal texts to gain a second-hand experience of transcendence and belief,” and “it displaces the need for belief or real-world practice into a textual world” (McAvan 2012, 19). While McAvan’s thesis refers to *explicitly unreal* texts, the genres she considers include fantasy, urban fantasy, and science fiction—at least the last of which being aligned by Atwood and Le Guin with myth, and, therefore, the truth or falsehood of such unreal stories could be contested. Regardless, what remains relevant here with the postmodern sacred and speculative texts is the significance of the story or narrative in obtaining genuine experiences of transcendence and belief—allowing them to be considered myths in the sense expressed herein.

Now that we have explored the various roles of myths in religion and religious studies, we will turn our focus to the neurological basis of myths.

MYTH AND BRAIN SCIENCE

While one may doubt the claim of a mythologist such as Joseph Campbell that scientific discoveries and technological inventions arise from myth ([1949]2008, 1), scientists have also conducted studies and produced theories on the neurological basis of myths in the human brain. For example, in *On Human Nature* (1978), sociobiologist Edward O. Wilson claims that humans are still largely ruled by myths, such as the three great mythologies: Marxism, traditional religion, and scientific materialism (190). These three tend to be linked together; Barbour, for example, also mentions these in *Myths, Models and Paradigms* (1974, 23). For Wilson, we are genetically bound to myth as form, of which religion is just one expression.

In an article primarily concerned with the neuroscience of belief, psychiatrist Eugene d'Aquili and neuroscientist Andrew Newberg refer to myth as well. They claim that "human beings have no choice but to construct myths consisting of personalized power sources to explain their world" and "to orient themselves within . . . [their] universe" (d'Aquili and Newberg 1998, 191). Newberg and d'Aquili link this myth construction with the "causal operator," which includes "the anterior convexity of the frontal lobe, the inferior parietal lobule, and their reciprocal interconnection" that together organize any given "strip of reality into what is subjectively perceived as causal sequences back to the initial terminus of that strip" (1998, 191). Newberg and d'Aquili expanded their article into book form under the title *Why God Won't Go Away: Brain Science and the Biology of Belief* (Newberg et al., 2001). Once again, most of the book is dedicated to religious experiences, arguing that religious experience is too complex and diverse to result from only the temporal lobe and the limbic structures, as had been theorized by other scientists such as Michael Persinger in *Neuropsychological Bases of God Beliefs* (1987) and V. S. Ramachandran in *Phantoms in the Brain: Human Nature and the Architecture of the Mind* (Ramachandran and Blakeslee 1998). Newberg and d'Aquili move away from a narrowly defined or physiologically positioned God-spot and toward a theory of belief that incorporates many of the brain's structures and functions—including those of language and myth. They claim that the creation and persistence of myths are due to causal and binary operators in the brain (Newberg et al. 2001, 63–65). Newberg and d'Aquili describe the creation of myth thus: "Any idea might trigger a myth if it can unify logic and intuition, and lead to a state of left-brain/right-brain agreement. In this state of whole-brain harmony, neurological uncertainties are powerfully alleviated as existential opposites are reconciled and the problem of cause is resolved. To the anxious mind, this resonant whole-brain agreement feels like a glimpse of ultimate truth. The mind seems to live this truth, not merely comprehend it, and it is this quality of visceral experience that turns ideas into myths" (Newberg et al. 2001, 73). It is here that one can see echoes of Lévi-Strauss and his idea of myths overcoming contradictions and binary thinking. Newberg and d'Aquili even go as far as to claim that "science is a type of mythology, a collection of explanatory stories that resolve the mysteries of existence and help us cope with the challenges of life" (Newberg et al. 2001, 170). While the theories of Wilson, d'Aquili, and Newberg may seem too easily comprehensive and conclusive, other less broadly sweeping studies have been conducted on the relation between myth and the brain.

In a review of research concerning the neuropsychology of narrative in 2004, psychologist Raymond Mar attempted to clarify three aspects of the field: the relation between story comprehension and story production, the use of brain lesion studies (damaged, nonnormal functioning

brains, alone) and brain-imaging (both normal and nonnormal functioning brains) in neuropsychological research, and the relation between cognitive science and neuropsychological models. Mar concludes that there are five regions involved in narrative processing. The medial prefrontal cortex is involved in the ordering and selection processes and obtaining theory of mind. The lateral prefrontal cortex is involved in the ordering of events, working memory processes, and goal-based functioning (such as the formation and execution of plans for action, goal-oriented working memory, and the temporal organization of speech, behavior, and logic). The temporoparietal region is involved in event ordering and the attribution of mental states (theory of mind). The anterior temporal region including temporal poles is involved in obtaining theory of mind and the concatenation of sentences or propositions. The posterior cingulate cortex is involved in simulation via autothetic awareness (a sense of self in past, future, or counterfactual situations), which includes visuospatial imagery, episodic retrieval, and the emotional modulation of memory processes (Mar 2004, 1427–29). Mar’s review emphasizes three important points for the neuropsychology of narrative: first, it affirms the multiplicity of brain structures and functions involved in myth processing; second, Mar notes that our cognitive models are more advanced than our neuropsychological models; and, third, in Mar’s introduction, he emphasizes the importance of narratives or stories—both fictional and nonfictional—to our beliefs, communication, and maximal health. This final point is one to which we will return in our exploration of the relation between myth and mental well-being. Research such as this reported by Mar (2004) is often classed as *cognitive narratology* (see Herman 2003; Sanford and Emmott 2012; Herman 2013), still an emergent trend within the broader discipline of narratology.

A final study of significance to the relation of myth and brain science is a 2013 study on the dreaming brain by psychologist Edward Pace-Schott, arguing that “story structure may . . . be the basic manner in which [the] brain organizes experience” (2). Acknowledging wide postulation of basic human storytelling tendencies, Pace-Schott suggests that the structure of dreams represents “a ‘hardwired’ tendency to represent reality in the form of narrative—a ‘story-telling’ instinct or module” (1). If our base mental state is considered that of unconscious dreaming, then our base mental state is narrative. For Pace-Schott, “[d]reaming may represent a potent, naturally occurring form of confabulation in which imaginary events are not only created and believed but are vividly experienced as organized, multimodal hallucinations,” such that “recalled dreams provide a ready source of story-like narrative that can acquire cultural significance equal to or exceeding the retelling of waking events” (2–3). Although published a year prior to Pace-Schott’s study, evolutionary psychologist Jonathan Gottschall’s *The Storytelling Animal: How Stories Make Us Human* (2012)

also addresses this theme. Gottschall notes that story-like dreams actually occur independent of rapid eye movement (REM) and across the whole sleep cycle, that we probably dream all night long, and that even most of our waking hours are spent in dreams, such that daydreaming is the conscious mind's default state (2012, 10–11). Once again, the suggestion is that narrative is the base mental state. Returning to Pace-Schott's article, he claims that the narrative structure of dreams may explain how, "in indigenous societies, story-like structure may have facilitated integration of dream phenomena such as parasomnias, lucidity, partial awakenings and dream bizarreness into existing belief systems, or even to create new beliefs and legends" (2013, 3). Pace-Schott has thus led us back again to the claims of mythologist Joseph Campbell, giving myths (as they arise in dreams) the power to create new beliefs.

The scientists reviewed above provide the suggestion that the brain itself is, if not hardwired for myth, at least capable of myth processing, and perhaps even of utilizing myths as a facile and primary mode of functioning. More recent research has been conducted on the relation between myth and consciousness, including self-understanding (Fireman et al. [2003]2012; Walker 2012), theory of mind (Mar 2011; Hutto and Kirchhoff 2015), and the relation between narrative and bodily based chemical reactions (Zak 2015; Zimmerman 2017). These topics border the relational topic to which we will next turn: myth and mental well-being.

MYTH AND MENTAL WELL-BEING

There has been a shift recently in science-and-religion to the more practical aspects and applications of traditional science-and-religion topics. I liken this move to a shift from systematic theology to practical theology—from the abstract and intellectual to the practical and the personal. I think the 2017 Science and Religion Forum conference on neuroscience and mental well-being, at which a version of this article was originally delivered, is both a sign and a part of this shift. Also of note are the James Gregory Lectures on Science, Religion and Human Flourishing, hosted by the University of St Andrews (Scientists in Congregations, Scotland); Durham University's MA program in Spirituality, Theology, and Health under Christopher Cook; the Center of Theology, Science, and Human Flourishing at the University of Notre Dame, directed by Celia Deane-Drummond; the Centre for Spirituality, Health and Disability at the University of Aberdeen, directed by John Swinton; and the newly launched Raphael Institute associated with The Guild of Health and St. Raphael, which is interested in science, religion, and healing. I very much see my research on myths as being linked with this sort of focus. As such, I wish to begin this section on mental well-being with a personal anecdote.

Six to eight years ago, I was struggling with a mental illness. Alongside the help of medical professionals, I found myself drawn to the autobiographical writings of people who were struggling with similar life events and mental states. I then began to write autobiographically myself—first journaling; then storytelling, both fictional and creative nonfictional. During this time, I had the opportunity to take a university course on autobiography. I used this course to explore the power of life stories in enhancing mental well-being in my own life from a critical perspective, and I discovered that there are three genres that describe the sort of writing and reading that I was doing. The first genre is trauma narrative, which focuses “on the narrator’s reliving of a past event,” such that the act of remembering “does not heal but rather exposes the wound” (S. Smith and Watson 2010, 283). The second genre is scriptotherapy: a narrative in which “autobiographical writing functions as a mode of self-healing” (S. Smith and Watson 2010, 279). The final genre is self-help narrative, which describes “a fall into dissolution and self-indulgence [or self-harm], the alienation of the [destructive] substance and behavior, and, with trust in a higher power, recovery of a truer post addiction self” (S. Smith and Watson 2010, 279). All three of these genres, whether read or written, were important in creating the identity that I carry around with me today.

Even though this is only my own anecdotal experience, I know that I am not alone in this experience. As Jonathan Gottschall writes, “A life story is a ‘personal myth’ about who we are deep down—where we come from, how we got this way, and what it all means. Our life stories are who we are. They are our identity” (2012, 161). Recall also the review article on the neuropsychology of narrative—in his introduction, Mar claimed that “[s]torytelling is . . . not only a native element of our social interactions, [but] from a health standpoint there is evidence to suggest it may also be a necessary one” (2004, 1414–15). In an article on the pastoral benefit of science-and-religion as it pertains to individuals struggling with cancer, Gillian Straine, director of the Raphael Institute, argues that “we need a revised metaphor for cancer” due to the power of language and stories surrounding the illness (2016, 96). Such comments quickly shift us toward the realm of therapy and counseling.

It is often the role of a therapist to aid the individual in re-shaping his or her personal myth. As Jonathan Gottschall reminds us, “A life story is not . . . an objective account. A life story is a carefully shaped narrative that is replete with strategic forgetting and skillfully spun meanings” (2012, 161). Moreover, Raymond Mar notes that “[r]esearchers have found that the more coherent and organized an account that one creates for a past trauma, the greater the likelihood of salutary gains as a result of such narration” (2004, 1414). Psychologists who might engage in this form of therapy include psychoanalysts and Jungian psychologists. Jungian psychologists, for example, following Jung’s work on archetypes and the collective

unconscious (Jung 1959), often use fairytales and myths with their clients (Kenney 2017, 23). The hero's journey, from Campbell's *The Hero with a Thousand Faces* ([1949]2008), has also been used in the counseling room (Lawson 2005). While such use of the hero's journey is not an uncontested practice (see, e.g., Willis 2011, 97–100), it remains an interesting (though perhaps unsurprising) turn from psychology to mythology and back to psychology again, as Campbell himself drew on Jung's theories of archetypes and the unconscious.

Narrative psychology is the general term for the attention to narrative in counseling practices. According to Julia Vassilieva in her recent book *Narrative Psychology: Identity, Transformation and Ethics*, narrative psychology is “characterized by the elaboration of models of personality and self based on narrative principles” (2016, 1). Emphasizing the multiplicity of stories available, Alette Willis claims that “[i]n narrative therapy, the first task of the therapist is to help their client separate their sense of self from the problematic dominant narratives that are told about who they are, and to show them that there are other possible stories to tell” (Willis 2011, 100). Similarly writing about narrative construction, cognitive processing, and health, Kitty Klein writes that stressful or traumatic memories can be difficult to integrate into one's personal myth due to their disorganized and incoherent state. Such disorganization means that the memories are linked to many different memory structures, thus becoming hyperaccessible. This means that they are called easily into consciousness involuntarily, reinstating the emotional and cognitive aspects of the original traumatic experience. Narrative is, therefore, used to actually transform memories into a streamlined representation of the original memory such that it no longer derails the rememberer (Klein 2003). As Gottschall said, *strategic forgetting* and *skillfully spun meanings*—our personal myths are constructions that aid in creating and maintaining mental well-being, or the lack thereof.

One final topic for consideration of myths and mental well-being is bibliotherapy—the therapeutic use of books. Although libraries were placed in psychiatric hospitals as early as the eighteenth century, the term *bibliotherapy* was not coined until 1916 (Cohen 1992; Jack and Ronan 2008). Bibliotherapy is used by nurses, psychologists, social workers, librarians, and physicians in psychiatric and pediatric settings (Cohen 1992). It is also commonly used by teachers and librarians working with young people (Cook et al. 2006). The type of literature used includes fiction, self-help, nonfiction, poetry, and (more recently) internet-based reading materials (Cohen 1992; Roberts et al. 2016). There are four types of bibliotherapy, according to the body of literature on the method: institutional bibliotherapy, for use with individual institutionalized clients; clinical bibliotherapy, for use with groups of clients with emotional and behavioral problems; developmental bibliotherapy, for promoting normal development and

self-actualization or to maintain mental health; and reading bibliotherapy, during which readings are suggested with little or no follow-up discussion (Cohen 1992; Jack and Ronan 2008). In an article about her own practice as a nurse-midwife using bibliotherapy with women, Laura Cohen explains the desired effects of the practice: “[W]hen individuals purposefully read for help in dealing with a difficult situation, they identified with literary characters and recognized themselves in what they read. This recognition of shared experiences simulated a support group for readers. Reading brought feelings and ideas to the surface, provided validation and feelings of universality, and led to catharsis. Reading also gave comfort and provided guidance, information, and escape from pain” (1992, 92). Bibliotherapy continues to be used, as continued and recent published studies show; however, the method also continues to seem unsystematized. As the authors of an excellent 2008 review article note, “[T]here continues to be considerable diversity in methodologies used across studies. This includes the type of literature (imaginative versus didactic), degree of therapist contact, client characteristics, duration of bibliotherapy and the use of bibliotherapy alone or as an adjunct The largely limited availability of systematic, objective, comparative research suggests that while many believe in bibliotherapy and are using it, sufficient substantiated evidence of how it works, why it works or if it works is still incomplete in many areas” (Jack and Ronan 2008, 177–78). Confirming this conclusion, in a 2016 study with a favorable conclusion toward the use of bibliotherapy for cancer patients hoping to manage their stress, the following future research into the practice is recommended: “a replication of the results with a larger and more diverse sample to establish the optimal recipient group, examination of whether a book offered with some additional support by a professional or trained oncology volunteer would be significantly more helpful than a book alone, examination of the acceptability of an audiobook, examination of the efficacy of bibliotherapy for patients, [and] research into the implementation of bibliotherapy in current psychosocial departments” (Roberts et al. 2016). It would seem that many of the critiques of bibliotherapy raised in 2008 still stand. However, in the context of this exploration of myth and mental well-being, the practices of Jungian psychology, narrative psychology, and bibliotherapy reinforce the suggested link between myth and mental well-being.

CONCLUSION: MYTH AND THE SCIENCE-AND-RELIGION FIELD

Recalling the quotes listed at the opening of this article, and the question *what does one do with such statements when considering the relationship between science and religion*, this exploratory article has shown that religion, brain science, and mental well-being converge on the concept of myth (a story or narrative of particular importance to self or society, in a manner

that can engage the whole of human experience). As for the relation between myth and the science-and-religion field, I have a few suggestions; two theoretical and one practical. The first theoretical suggestion is that we need more science-and-religion scholars talking about myth at the interface of science and religion. Ian Barbour got us started, but we need more work—especially work that acknowledges the fundamental role of myth in being human. Excellent work is being conducted on myth by literary scholars, evolutionary psychologists, philosophers, and neuroscientists; however, the science-and-religion scholar is especially equipped for the interdisciplinary work needed to bring myth into science-and-religion discourse and research. The second theoretical suggestion is to recognize the storied human mind at the center of science-and-religion discourse. A study of myth as it relates to science-and-religion opens the field to self-awareness of the mental processes behind our studies and theories. A practical suggestion is to recover the power of myth to help people relate to and comprehend science-and-religion topics. There are two types of myth available to us for this: historical myths and literary myths. Recovering historical myths includes, for example, the work of John Hedley Brooke (*Science and Religion: Some Historical Perspectives* [1991]) and Ronald Numbers (*Galileo Goes to Jail and Other Myths about Science and Religion* [2009]), historians reworking and complexifying the historical science-and-religion myths (regardless of truth or falsehood) already in existence. Recovering literary myths could include, for example, the work of an ordained science missionary hosting a science fiction reading group (Brown 2017), or my own experience of being invited to speak at a church event on religion and science fiction, during which I was able to discuss the relationship between science and religion as expressed in science fiction films and texts. Such events are opportunities to speak about science-and-religion to audiences that might otherwise not be aware of or actively shy away from such topics. Myths hold value for the science-and-religion scholar and the science-and-religion popularizer. They are a part of being human; they are a site upon which science and religion come into being; they influence our mental and physical well-being. Myths are here to stay, and they are worth our attention.

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