

Chapter 1

**DECONSTRUCTING, GRAPPLING, AND MOVING
IN THE FIELD OF OTHERS**

The creative is successful; this is beneficial if correct.

I Ching

We are staggeringly lucky to find ourselves in the spotlight. However brief our time in the sun, if we waste a second of it, or complain that it is dull or barren or boring, couldn't this be seen as a callous insult to those unborn trillions who will never even be offered life in the first place? As many atheists have said before me, the knowledge that we have only one life should make it all the more precious. The atheist view is correspondingly life-affirming and life-enhancing, while at the same time never being tainted with self-delusion, wishful thinking, or the whimpering self-pity of those who feel that life owes them something.

Richard Dawkins, *The God Delusion*

The undivided, ego-free person who no longer see parts but realizes the "Itself", the spiritual form of being of man and the world, perceives the whole...there is no longer heaven or hell, this world or the other, ego or world, immanence or transcendence; rather, beyond the magic unity, the mythical complementarity, the mental division and synthesis is the perceptible whole. To this he does not need the retrospective bond (religion). It is pre-ligious; its presence is achronic, time-free, and corresponds to man's freedom from ego.

Jean Gebser, *The Ever-Present Origin*

INTRODUCTION

It is truly amazing what people think. And it is truly fascinating the developmental stages through which thinking and consciousness can develop (Austin, 2000; Fischer and Bidell, 2006; Gebser, 1985; Labouvie-Vief, 1994; Pascual-Leone, 2000). Consciousness itself makes us aware of human subjectivity, and every attempt to construct an objective account of consciousness struggles with the problem of human subjectivity (Ò'Nuallàin, 2006; Rose, 2006). Consciousness itself -- coupled with our prolific imaginations -- can offer us a sense of limitless, radical mental freedom and profound, universal connection: this subjective reality often points us in the direction of ideas that pertain to a transcendental, spiritual state of being that is somehow above and beyond the material world, free from all material constraints.

And some thinkers believe that categories of spirituality represent a certain peak in human cognitive and emotional development – modes of thinking and feeling that correlate with wisdom (Gebser, 1985; Pascual-Leone, 2000). Others describe spirituality as a core character strength: for example, it is listed as one amongst the set of five *Strengths of Transcendence* in the positive psychology classification system (Peterson and Seligman, 2004)⁴.

At the same time, not everyone thinks about or values spirituality, but this will not surprise those who think that cognitive-emotional aspects of spirituality – a sense of connectedness, universality, and fulfilment (joy and contentment) that result from personal encounters with a transcendent reality – represent a core dimension of personality along which people *vary* (Piedmont, 1999). Whether or not we agree that spirituality is a dimension of human ‘personality’ or human ‘character’, many psychologists would agree with me in thinking that spirituality is difficult to understand: there is some confusion as to how best to conceptualize its psychological structure, process, and function -- and this general state of confusion exists in the context of a close historical and conceptual coupling between religiosity and spirituality, a conceptual coupling that has been thrown into disarray over the past century with the rise of secular views on spirituality (Hill et al., 2000; Zinnbauer et al., 1997). Some psychologists -- most notably, the

⁴ Other strengths of transcendence in this system include appreciation of beauty, gratitude, hope, and humor. The complete character strengths classification system includes 24 character strengths, adding to transcendence 5 strengths of knowledge (creativity, curiosity, open-mindedness, love or learning, and perspective), 4 strengths of courage (bravery, persistence, integrity, and vitality), 3 strengths of humanity (love, kindness, and social intelligence), 3 strengths of justice (citizenship, fairness, and leadership), and 4 strengths of temperance (forgiveness and mercy,

radical behaviourists (Chiesa, 1994) -- would not characterize spirituality as a cognitive-emotional representation, a personality trait, or a strength of character, and they would clear away any confusion over the ontological condition of spirituality by focusing their analysis instead on the conditions under which people emit the response ‘spirituality’ or related terms. At the same time, they would be interested in the consequences of any such response in context.

Nevertheless, when recently I asked a group of third year students, “Do you think psychologists should study spirituality?” Some of them said, “No, spirituality cannot be observed or objectively measured – it has no place in psychological science.” I wondered if this reply reflected a misunderstanding of the goals of psychological science -- a curious negation of certain categories of human experience as a focus of inquiry -- or simply a dislike for entertaining ideas that are in some way associated with orthodox religion. In truth, I cannot claim to have direct access to the minds of my students, and I can only speculate as to why they think the way they think. At the same time, even though the students failed to tell me what spirituality is, many students did at least consider spirituality an important focus on inquiry.

UNDERSTANDING

In order to understand spirituality, we must first accept that there is truth in its psychological existence. In other words, states of consciousness and associated abstractions (i.e., ideas, values, and beliefs) that pertain to the concept “spirituality” exist in human systems -- both the states and the associated abstractions are part of a living system -- and one of our tasks as scientists is to understand the structure, process, and function of this living system at the individual and group level of analysis. Obviously, this is no easy task: consider the intra- and inter-individual variability in the action state that needs to be mapped (Fischer and Bidell, 2006), and consider also the great variety of conscious states and associated abstractions linked to the concept “spirituality” throughout the ages (James, 1985). Nevertheless, in opening this dialogue, it will not help our cause to delete all the nouns, verbs, and adverbs that pertain to unobservable mental phenomena. We might develop a *new* language that allows us to replace the old word “spirituality” with other words, operational definitions, and theoretical formulations, but we will need to begin by reference to the

humility and modesty, prudence, and self-regulation). The system itself is an example of formist thinking. See chapter 3.

language and conceptual structures that already exist in our culture, and there is no guarantee that other scientific sub-cultures will buy into our new approach (Hayes, 2006; Hayes et al., 2001). In fact, in the face of what we can now quantify as very rapid cultural evolution, we can probably predict that our *new* way of thinking about spirituality will be swiftly uprooted and replanted as part of another “new” computation (Kurzweil, 2005; Pettersson, 1996; Richerson and Boyd, 2005)

And whether or not you can empathize with the folk psychology of the lay population -- that great mixture of magical, mythical, and rational ideation -- spare a thought for those who wish to ‘reclaim spirituality’ from established religion, and those who wish to allow spirituality some ‘continued existence’ in culture generally (Gebser, 1985; Pascual-Leone, 2000; Peterson and Seligman, 2004). Consider their plight: they cannot simply clear the slate, start over, and redesign themselves and their culture from scratch. They may wish to *transcend* various ideas, values, and beliefs that arise in their mind and that populate their world, but they may find it difficult to define themselves in relation to other ‘transcendental’, ‘spiritual’ states of consciousness and associated abstractions that already exist in a cultural field of interdependencies. As social beings, as thinkers, we all have to operate in the field of others. The category of advanced spiritual development some psychologists point to may emerge as a highly integrated, valued, autonomous state at some point during a person’s life, but the process of movement toward this autonomous state involves movement through the field of others (Erikson and Erikson, 1997; Labouvie-Vief, 2005).

Ultimately, we cannot first delete spirituality from culture if our goal is to understand it and perhaps express it as part of our ‘personality’ or ‘character’. The desire to delete some aspect of reality before working to understand it is, essentially, an idealised over-generalisation of Descartes philosophy of science. In Descartes’ method, the thinker begins by clearing the mind of *everything* – slowly and gradually, components are introduced, until all components necessary to describe the focus of inquiry remain. However, pragmatists have never assumed this to be a realistic starting point. For example, in Peirce’s method, the thinker must begin with the prevailing state of mind: the mass of cognition already formed, “of which you could not divest yourself if you would” (Warfield, 2004).

And C.S. Peirce tells us something else: Although models of reality must be evaluated using formal logic, sentiment shapes the facts selected. We cannot easily divest ourselves of our sentiments, and the way in which our sentiments influence our selection of the ideas, values, and beliefs we consider ‘good’ and ‘bad’ in our culture. Having said that, we must strive to be neutral – we must work to build a neutral systems science (Warfield, 2003, 2004) – and we must

therefore begin our inquiry with “*what is*” and with “*what we possess by way of knowledge*”; and not with “*what should be*” or with “*what should be deleted or negated*”.

Some argue that it is time for us to give up our belief in the existence of God (Dawkins, 2007). In fact, the battle over God has raged for centuries. But the God concept, much like the concept of spirituality, has proved very resilient.

Consider the battle between Leibniz and Spinoza in the 17th century. During a two week blizzard in February 1686, while forced to take a break from his increasingly embarrassing attempts to construct a windmill for silver mining in the Harz Mountains, Leibniz worked frantically to describe “a secret philosophy of the whole of things” in his famous *Discourse on Metaphysics*. With the explicit purpose of furthering his project of church reunion, Leibniz sets out to defend the view that God exists. In so doing, he took upon himself the task of clearing the ground of European thought of the apparently ubiquitous Substance of Spinoza.

Spinoza attempts to deify Nature. God is Nature, he says. But Nature has no will, only blind necessity. Therefore, God has no will. Leibniz argues that any God worthy of the name must be able to make choices; he must have an intellect and opinions, and a will with which to affirm his decisions. Furthermore, in Spinoza’s philosophy “good” is no more applicable to God than, say, “banana” or “tasty”. So why use the term “God” at all? Leibniz thinks that what is divine must be beyond what is natural, or else it is simply not divine. Also, to say that nature is divine is to judge the world; it is to imply that the world as a whole is good. As Nietzsche has it, Spinoza “deified the All” in order to “affirm” the world.

Spinoza does say the world is “perfect”, but he also argues that the totality of things lies beyond all human judgement. However, Leibniz argues that all Spinoza can truly mean by “perfect” is the abstract notion “complete” and therefore he cannot judge or “affirm” the world in the way that one must if one says that it is divine.

Spinoza says that God has only one world to choose from -- the one that follows ineluctably from its own Nature. Leibniz counters that God had the option not to create this world. Ultimately, Spinoza believes in an immanent God; Leibniz argues for a transcendent one -- it is the distinction between the ‘here and now’ versus the ‘before and beyond’. Leibniz considers Spinoza’s concept of God “bad” and “dangerous” because he believes it will lead to out-and-out anarchy. Conversely, Spinoza argues that Leibniz’s God does nothing but continue to restrict the freedom of the human spirit; it does nothing to facilitate the true expression of one’s own nature; it does nothing to facilitate understanding in this world.

The conception of God put forward by both Leibniz and Spinoza was more than metaphysical – both had political intentions. Leibniz argued that ‘belief’ in the goodness of God will bring about the desired political ends of unity, stability, and charity. Spinoza sees orthodox religions as chains inhibiting human freedom, and he sees human freedom as the pinnacle expression of Nature, or God. When there is freedom from orthodox religion, then we will see unity, stability, and charity. Orthodox beliefs will not produce any real social benefits, and they are more likely to cause conflict.

For Spinoza virtue is its own reward – the question of immortality can have no bearing on our salvation, for the wise man has no need of additional rewards in an afterlife to justify virtue in this life. Leibniz argues that in this life virtue often goes unrewarded. Belief in the immortality of the soul is therefore essential. The doctrine of personal immortality is vital to our happiness, if we are to have faith in the idea that the universal mathematics of rewards and punishments add up to “justice”. Leibniz implies that it is the “belief in” and not the “fact of” immortality that really matters for our happiness.

According to Spinoza the intellectual love of God (or Nature) is the highest form of reason. But this love cannot be returned by God; Spinoza’s Substance is utterly indifferent to humanities concerns. Leibniz thinks this is ‘unreasonable’ – how can understanding that what happens, happens necessarily produce any enduring happiness?

In Leibniz’s view God has a mind, as do human beings. As such, in order to defend his view of God, Leibniz had to introduce more than one Substance into the world: mind and body. Conversely, Spinoza sees mind and body as two perspectives on the one reality: mind is the idea of the body, and the perceived unity and identity of the mind arises because a collection of thoughts and desires always pertains to a particular body.

Spinoza’s philosophy argues that the human being is nothing exceptional – simply another manifestation of Substance. Many have reacted to this view. Philosophy and psychology often work to inject something “extra special” into human being. Existentialist philosophers point to our “radical freedom” and the associated burden of responsibility this implies. Humanistic psychologists point to our potential to “self-actualize”. Evolutionary psychologists present the view of humans as the “moral animal”. Positive psychologists strive to enhance the good; they attempt to construct a scientific account of positive emotions and positive character traits, devising strategies that will help us to find happiness through the exercise of our unique character strengths.

In some ways, although many modern scientists implicitly accept Spinoza’s view of humans as one manifestation of Substance, the modern mind continues to

endorse a unique mix of Spinoza's neutral equanimity and Leibniz's furious striving. Modernity endorses the view: through understanding there can be continual achievement of a greater perfection. The difference between this view of understanding and the view that Spinoza offers, as it applies to human nature, is that Spinoza suggests we should be content simply to understand; we should not strive so hard to change our nature. In other words, we should be content with the understanding and full expression of the nature we possess.

Many of the beliefs that guide individuals within the modern world – the faith in the sanctity of the individual, the ideal of charity, and the unique purpose of humankind – seem to follow more directly from Leibniz's than from Spinoza. Notably, much like positive psychologists have used 'progressive' views of cultural evolution as a means to bolster a sense of hope, meaning, and purpose (Seligman, 2002) -- a view that can also manifest in a radical optimism (Kurzweil, 2005) -- so too did the Leibniz system propose that the "universe is involved in a perpetual and most free progress, so that it is always advancing toward greater culture". It is a view that not all evolutionary psychologists would necessarily agree with (Laland and Brown, 2002; Richerson and Boyd, 2005).

More generally, the fate of God and the debate over Human Nature has yet to be resolved, and the battle between "good" and "bad" will never end. If Spinoza was correct, it is likely that, in understanding and expressing our true nature, the world will continue to produce characters that discover themselves more or less aligned with Leibniz and Spinoza. When we consider the view of Richard Dawkins in *The God Delusion*, we might well argue that he aligns himself more with Spinoza than with Leibniz, because, like Spinoza, he desires to overthrow our view of a transcendent God. However, unlike Spinoza, Dawkins does not replace a transcendent God with an immanent God. Much like Einstein had, Dawkins has a certain respect for Spinoza's pantheism, describing pantheism as "sexed-up atheism", but Dawkins doesn't talk about modern secular spirituality, which is one of the cultural off-shoots of Spinoza's sexed-up view of Nature.

SENTIMENT AND REASON AND DAWKINS

We may not be able to provide an unadulterated version of "what is" but we can certainly ask people what they think. Most psychologists recognize the value of asking people what they think. When I asked a sample of friends and colleagues who have read *The God Delusion* by Richard Dawkins, "So, what do you think?," many of them started off by scrunching their face in mild disdain

(much like Dawkins does when talking to homeopaths): “I think he’s picked on an easy target – most people don’t really believe in God, they believe in belief” (Physicist), or “He’s missing the point – there is more to religion than simply believing in God: there is a positive psychological process associated with being spiritual and Dawkins says little or nothing about it” (Behavioural Scientist), or “He lacks requisite balance – his blind faith in science is no less extreme than another man’s blind faith in God” (Social Scientist), or “Study the success rate of secularist moral ideologies in the 20th century and ask yourself, honestly, what is so great about the moral alternatives to Religion, and, tell me, how can the science of evolution inform how it is we can best redesign our moral, social, political, and cultural systems? (Literary Critic)”

But Dawkins has been fighting his battle for over 20 years now, and a close reading of his book illustrates some of the logical problems associated with all these starting points and some of the different places they lead to. Consider one possible reply to each comment in turn:

1. Many people do still believe in the existence of a God, and they consider this to be a good, true, and psychologically beneficial belief -- even if, in reality, the psychological costs and benefits associated with different religious and spiritual belief profiles is more complex than most people, including Dawkins, generally appreciate (Pargament, 2002a; Pargament, Magyar-Russell, and Murray-Swank, 2005; Zinnbauer, Pargament, and Scott, 1999). And many people believe in all sorts of other beliefs in the absence of any sound (empirical and rational) basis for their beliefs – other than their belief that a set of strong sentiments and perhaps a related set of (often incoherent) arguments is a sound enough basis for their strong belief in their belief (Astebro, Jeffrey, and Adomdza, 2007; Bering, 2006; Brannon, Tagler, and Eagly, 2007; Dewey, 1910; Lee, 1998). Thus, the question as to what it means to believe in belief is an open one and one can hardly conclude that it is necessarily positive. For example, Leibniz considered belief in the immortality of the soul as essential to our happiness, because only the afterlife can secure our sense of justice in this world. Like any other rational being, does Dawkins not have the right to challenge what he perceives as irrational?
2. Dawkins may have said very little about spirituality, and this you might consider an omission, particularly in light of the fact that religiosity and spirituality are interdependently expressed in the population (Marcoen, 2005; Zinnbauer et al., 1999) -- his focus is on religious belief and not some form of ‘spiritual consciousness’ -- but if one is to mount the

argument that spirituality is part of a positive psychological process, one must also be willing to consider psychological science. Thus, you must define what you mean by spirituality, measure it somehow, and examine its causes and consequences in an objective manner (Dalby, 2006; Hill et al., 2000; Koenig, 2004; Marcoen, 2005; Piedmont, 1999; Zinnbauer et al., 1997). To simply state that spirituality is a good thing, without providing a sound basis for your belief, will fail to convince the average psychologist.

3. Dawkins may have ‘faith’ in science and one might argue that the strength of his faith somehow blinds his understanding of religious faith, or makes it difficult for him to empathize with a person who believes in “nonsense”, but he claims to understand religious faith and he is able to provide a reasonable explanation for his faith in science and his lack of faith in the existence of a God. Thus, he has both sides of his argument prepared and if you are to describe his faith in science as ‘blind’, you need a more subtle argument: you need to describe, in particular, what you mean by ‘blind faith’ in this context. Ultimately, you also need to consider various different meanings of the word ‘faith’ when applied to different people in different contexts.
4. Just because you may have judged secularist moral ideologies to have somehow failed us (and here you need to specify the moral ideologies you are referring to, providing evidence of specific failures), this does not imply that religious moral ideologies have been altogether successful. Dawkins provides us with a veritable catalogue of atrocities enacted in the name of religion. Our definitions of success and failure are critical here, and regardless of the long list of failures the advocates of both religious and secular ideologies could readily bring to the table, in simple terms, the failure of one ideological system does not imply the success of any other ideological system. The analysis of success and failure is more complex. For example, two distinct systems of belief may operate in isolation in the population, in which case they can be evaluated as more or less successful by some criteria. But two (or three or four or five) systems of belief may also co-exist, co-function and compete for prominence in the population (Boyd and Richerson, 1995, 2000; Boyd and Richerson, 2005), in which case it may be difficult to evaluate the source of generalized system failures (e.g., war, discrimination, bigotry, loss of social capital, declines in physical health and psychological well-being, and so on). More generally, the science of evolution is retrospective: it reveals principles of change and emergence at the

population level – and although certain trajectories of future development can be predicted (Pettersson, 1996), they may not amount to anything like some idealists hope for (Kurzweil, 2005; Seligman, 2002). Evolutionary science cannot, in any strict sense, inform our design of new moral, social, political, and cultural systems – evolution simply grants us a (growing) population of new brains with the potential to understand and learn from the successes and failures of the past.

None of these replies tend to satisfy my friends, because those who dislike Dawkins dislike the general weave of his thoughts. Dawkins does much more than simply challenge the existence of God. He views the God delusion as a symptom of bigger problems associated with the whole system of irrational religious ideas, values, and beliefs endemic in our culture: his inquiry challenges the very thoughts, behaviours, and group dynamics of Jews, Christians, and Muslims. (He bypasses Buddhism⁵.) Dawkins presents a powerful psychological, socio-political, and evolutionary analysis of the ways in which the major monotheistic systems of belief influence individuals and groups, and one cannot deny that it is a very compelling account of the various *negative* influences.

On one level, Dawkins is simply challenging what he perceives to be the rise of magical and mythical thinking in modern culture, and his hope is to liberate the masses by pointing them in the direction of science and western enlightenment. Nonetheless, understanding formal logic, the various assumptions associated with different worldviews, and the way in which sentiments influence the construction of arguments (Koltko-Rivera, 2004; Warfield, 2003, 2004), it is evident that Dawkins presents one inquiry amongst many, and perhaps it is the way his sentiments direct his selection of the facts that irks some of the Irish people I have conversed with. But many people have not read Dawkins very carefully -- others simply don't understand his arguments -- and when pushed to provide reasons for their most fundamental objections they will sometimes admit that they simply dislike what they perceive to be his “uncaring, condescending, oppositional stance toward people with religious tendencies”. It is a case of the objective, hyper-rational, method-driven man -- the evolutionary scientist, the non-psychologist -- having no empathy for the subjective, sometimes irrational, method-free spiritual movement of humankind.

⁵ “Indeed, there is something to be said for treating these not as religions at all but as ethical systems or philosophies of life” (p. 59). Dawkins appears to overlook the fact that many Buddhists believe in reincarnation.

Some of my friends and colleagues go further. They think that Dawkins is perhaps condescending at times, but he writes to an audience who fail to appreciate the negative that religion does. In this sense, some of my friends and colleagues can empathize with Dawkins to a large extent. They can empathize with Dawkins when he gets angry with the religious. It is anger based to some extent on all the damaging negative things that large scale belief in superstition does. They accept that all Dawkins ultimately wants is a bare, scientific, rational understanding of the world on the part of everyone – a world in which all people have some basic empathy for others and care about helping them to understand and grow psychologically. “That world would be much better than the present one because it would be more mindful”, says one colleague. “It is seeing the constant mindlessness wrought by religion that makes people such as Dawkins angry. Many people simply do not appreciate the subtle and not so subtle ways in which religious (and other forms of) mindlessness can retard progress toward a saner, more psychologically flexible world.”

ENLIGHTENMENT

Putting aside Dawkins and the existence of God for the moment, if you truly value your beliefs -- whatever they are -- you need to first know what they are. Second, you need to establish some foundation for your belief, and if your belief is an important part of your identity, you need to know how to defend it, such that your foundation is strong and secure -- your balance stable. If this precious thing you value so much is too easily destroyed in the context of dialogue or debate, then you might well need to question its true value.

Thus, if your definition of spirituality simply involves discovering the ‘nothingness’ at the base of conscious experience, beneath the everyday ‘contents’ of consciousness, and then allowing for the existence of your subsequent ‘radical freedom’, which arises as a consequence of the various decisions you need to make to place ‘something’ in the field of ‘nothingness’ you have discovered (Ò'Nuallàin, 2006; Sartre and Mairé, 1973), then you may need to make a distinction between your definition of spirituality and the definitions presented to you by your culture -- you may wish to distance yourself from the irrational and devise a meaning and a method that can withstand the test of the rational mind -- you may wish to define for yourself a post-rational, philosophical, phenomenological model of spirituality that works for you. One way or the other, it makes sense to invest some cognitive effort into the construction of your belief.

You need to understand that the process of cultural evolution has produced, and will continue to produce, both adaptive and maladaptive memplexes (systems of idea, value, and belief that have greater or less truth value and functional utility at different times, in different contexts), and you need to possess the courage to use your own understanding in the face of what culture informs you to be ‘thus’. In reality, the ‘thus-ness’ of things, regardless of your perspective and acquired knowledge, is something that is experienced – and your conscious experience ‘itself’ is a very concrete and real thing.

But, I hear you say, there are levels of consciousness and associated qualities of thinking, some of which are more regulated and controlled than others (Austin, 2000; Dewey, 1910; Pascual-Leone, 2000), and as you stand face-to-face with the reality of your culture and the reality of your conscious experience, you might wish to recall what Emmanuel Kant said in 1784 when asked the question, ‘What is Enlightenment?’

“Enlightenment is man's emergence from his self-imposed immaturity. Immaturity is the inability to use one's understanding without guidance from another. This immaturity is self-imposed when its cause lies not in lack of understanding, but in lack of resolve and courage to use it without guidance from another. Sapere Aude! [dare to know] "Have courage to use your own understanding!"-- that is the motto of enlightenment.”

Dawkins, in pointing to maladaptive meme-correlates of religion -- that is, negative behavioural and social correlates of specific religious ideas, values, and beliefs -- demonstrates with ample courage that he can translate the thus-ness of his experience into an argument supporting the claim: Religion is dangerous nonsense. Ultimately, Dawkins believes that monotheistic religion, as it exists today, is a maladaptive by-product of our biological and cultural evolution – it clouds our vision of “ultimate reality”. However, his game of mental kung fu is not the only one an evolutionary scientist might decide to play, and some have attempted to point to both the adaptive and the maladaptive meme-correlates of religion (De Duve, 2002; Richerson and Boyd, 2005).

Psychologists have similarly argued for the existence of both adaptive and maladaptive correlates of religiosity and spirituality, and one problem with the memetics analysis developed by Dawkins and others is that it fails to amount to anything close to a balanced, neutral scientific account of system dynamics (Laland and Brown, 2002; Warfield, 2003). One core problem in this context is the failure by Dawkins to fully understand psychological science and the distinction between a substantive analysis of beliefs and a functional analysis of

beliefs -- that is, distinguishing the truth value of beliefs from the way in which beliefs (be they magical, mythical, or rational) function as part of the human action process in contexts multifarious.

For example, research suggests that religious rituals and taboos can promote intragroup cooperation and commune longevity (Sosis and Bressler, 2003), and some psychologists suggest that religious beliefs can bolster the group cohesion undergirding certain convoys of love and caring that accompany people over the lifespan (Zinnbauer et al., 1999). Other researcher suggests that religion can be conducive to the development of *cosmic transcendence* (Atchley, 1997) -- a sense of spiritual connectedness with the universe, other living beings, past and future generations (Piedmont, 1999) -- and that this broadening of awareness is often associated with potent positive emotions. For example, some have described a form of *spiritual well-being*, which includes a sense of connection to something beyond the individual; moments of awe and wonder; moments of transcendence; being concerned with deep values; finding some meaning in life; feeling that the universe will endure (Bruce, 1998).

But psychological research also points to the intra-individual, inter-individual, and cultural variation that exists. For example, adults can both embrace and abandon the path of religion as they age (Hazan, 1984), although continuity and stability of belief may be the norm (Mc Cullough and Boker, 2007); the US is more religious than Europe (Davie, 2002), and Americans become more religious with age (Levin, 1995); Women embrace the religious path more often than men (Davie and Vincent, 1998); concepts of spirituality in the East and West differ (Ho and Ho, 2007). And although studies in the US often report links between religious/spiritual beliefs and reduced onset of physical and mental illness, reduced mortality, and better recovery from or adjustment to physical and mental illness (George, Larson, Koenig, and McCullough, 2000; Levin, 1994), British samples don't always demonstrate these same links (King, Speck, and Thomas, 1999). Strength of belief may be an important factor. For example, compared to those with strong spiritual belief, Coleman et al. (Coleman, Mc Kiernan, Mills, and Speck, 2002) found higher levels of depression after death of a spouse in those with low to moderate belief strength.

Psychologists also point directly to the maladaptive. One longitudinal study (Strawbridge, Shema, Cohen, Roberts, and Kaplan, 1998) reported religiosity buffered stress against health and financial problems, but exacerbated stress caused by marital and child problems. Researchers point to maladaptive religious coping (Pargament, 2002a), associated with beliefs about a punishing, abandoning, and absent God, and expressions of anger and discontent with Him and others. Others remind us that some non-theistic forms of spirituality, like

Buddhism, do not suffer negative imagery associated with any God *per se*, and that one of the strategies used by Buddhists -- meditation upon compassion -- is potentially beneficial for one's physical health (Davidson and Kabat-Zinn, 2004; Lutz, Greischar, Rawlings, Ricard, and Davidson, 2004b), as is the practice of meditation generally (Wachholtz and Pargament, 2005).

Dawkins is certainly entitled to his view. However, one can argue for the existence of hierarchical orders of complexity in thinking about religiosity and spirituality (Commons, 2005; Commons and Miller, 2003) and one can sample from a huge range of functional relations when constructing models of psychological reality in this regard. For example, it is relatively easy to construct a systematic argument that focuses on the maladaptive *or* the adaptive correlates of religion; it is a little more difficult to construct a metasystems account that coordinates maladaptive *and* adaptive functional relations; and the most difficult thing of all is to construct a paradigmatic and cross-paradigmatic explanation of both religion and spirituality that draws upon all the relevant sciences -- evolutionary, social, behavioural, and brain sciences -- thus providing a balanced, neutral scientific account of system dynamics.

Dawkins believes that religion clouds our vision of "ultimate reality", and if you choose to think about it like Dawkins does -- and if you advocate a view other than the one Dawkins presents -- you need to decide what "ultimate reality" means to you, and whether or not religion and spirituality has any part to play in your "ultimate reality". And unlike those of my friends who dislike Dawkins and his worldview, I have come to a very different conclusion: a close reading of Dawkins has led me to believe that he is, in fact, a deeply spiritual man. He wants to *transcend* the limits of our world vision, the incredibly narrow vision of reality that evolved in

"Middle World [a place] where the objects that mattered to our survival were neither very large nor very small; a world where things either stood still or moved slowly compared with the speed of light; and where the improbable could safely be treated as impossible. Our mental burka window is narrow because it didn't need to be any wider in order to assist our ancestors to survive" (p. 412).

And he asks:

"Could we, by training and practice, emancipate ourselves [...] and achieve some sort of intuitive -- as well as just mathematical -- understanding of the very small, the very large, and the very fast? I genuinely don't know the answer, but I am thrilled to be alive at a time when humanity is pushing against the limits of

understanding. Even better, we may eventually discover that there are no limits”
(ibid, p. 420)

To move with Dawkins across and down the page is a liberating experience. It will do much for the development of your mental kung fu. Naturally, Dawkins does not see everything, and you might be disappointed if you were to follow him religiously. But this he would hardly wish for you. Embracing enlightenment, your only real choice is to read him and see if he sees what you see. Read him and decide if the intuitive understanding he hopes to achieve is the same kind of intuitive understanding you hope to achieve.

THE CULTURAL EVOLUTION OF SPIRIT AND THE DECISION TO FIGHT WITH MAMMY OVER MEMES

One only needs be minimally connected with history to know that our ancestors lived in a world occupied with spirits and Gods (Gebser, 1986). Jean Gebser argues that awareness of our past ‘magical’ and ‘mythical’ belief systems - those mental structures associated with the slow development of consciousness - can help us to better understand modern spiritual consciousness. Stated another way, an understanding of evolution -- biological and cultural – can serve to deepen our understanding of the spiritual dimensions of existence.

When Gebser talks about spiritual consciousness, part of what he is referring to is a quality of experience that allows us to penetrate reality and perceive ultimate reality with greater clarity. Thanks to the extraordinary power of the scientific method, we are beginning to learn something of what lies beneath entities such as the cosmos, matter, life, and mind. In this process, we have been forced to transcend appearances and penetrate reality with an increasing intensity of awareness and computational power.

Prior to the birth of scientific thinking (and the ability to represent the relation between self and other by reference to an ‘objective’ theory), historical artefacts suggest that human consciousness was *undifferentiated*. During the *magical* period (Gebser, 1986), self and other were experienced as *one-and-the-same* (i.e., consciousness was one-dimensional, 1D), much like infants experience the world prior to developing the ability to reliably conceptualize the distinction between self and other (Piaget, 1952). In this undifferentiated state, the “religious” experience is that magical sense of “world alive”. This undifferentiated sense of aliveness is projected into the inanimate as well as the animate world.

Later, with the development of language as a form of communication, self and other were differentiated. Consciousness, says Gebser, is now two-dimensional (2D). With language, there emerges a narrative, non-scientific account outlining the “reasons” why the world is alive. In this *mythical* era, Gods and spirits are named, creation myths are passed from generation to generation.

With the birth of science, reasoning became grounded in observation and description of functional relations in the concrete world. Consciousness is now three-dimensional, because now the relation between self (1) and other (2) is understood by reference to abstract theories (3). The world of spirits and Gods started to crumble -- but it never fell apart completely. Logos sought to replace mythos: imagination and feeling had no place in the new world order -- intuition and subjectivity had to be replaced by rationality, objectivity, and systematic thinking (Labouvie-Vief, 1994). Nevertheless, without a sound theory describing the birth of the universe, life, and humanity, the creationist myth lived on in a happy dualism that separated the world of mind and spirit from the concrete world. This dualism was maintained throughout the middle ages, when scientific progress was suppressed in favour of maintaining social order and control, the religious status quo (Stewart, 2006). As such, *hypothetico-deductive reasoning* was established in a divinely-given, intelligently-designed world. The creation myth was retained. Spirits were retained. Therefore, 3D consciousness never fully escaped 2D dualism or the allure of mythos. (Notably, Gebser suggests that we are now moving toward an advanced spiritual consciousness that does not seek to ‘escape from’ but to ‘make integral’ and ‘advance upon’ earlier consciousness structures⁶; see Chapter 2).

It was only with the slow expansion of scientific analysis and synthesis that the physical, chemical, biological, psychological, and social levels of analysis gravitated toward greater integration. The long established dualism separating the immaterial from the material was challenged from the Renaissance on. But it was not until the middle of the 19th century that established religion (in the western world) was forced to face its ultimate challenger: evolution (Darwin, 1869). For many, Darwin’s theory of biological evolution disestablished the belief that humans are divine creations.

⁶ Gebser considers a 4D consciousness structure to be the hallmark of modern spirituality. 4D consciousness is aware of, accepts, and utilizes the latent power in the magical (1D), mythical (2D), and mental (3D) consciousness structures, but it cannot be systematized by 3D consciousness, which is rational and bound by space and time in its form of representation. 4D consciousness is aperspectival, arational, integral, open and free, present, concretizing, ego-free, transparent, and rendering diaphanous the world perceived and imparted in truth.

At the same time, the science of evolution was slow to speculate about the functional (i.e., adaptive) significance of the development of religion, and most scientists had relatively simple-minded views on the subject. Long before Richard Dawkins coined the term ‘meme’ (Dawkins, 1976), describing it as “a unit of cultural transmission, or a unit of imitation” (p .206), many post-Renaissance thinkers had challenged religious meme systems, or *memeplexes*, as anti-scientific. Dawkins himself used the ‘meme’ construct to explain how religions acted as self-perpetuating ideational complexes that have hoodwinked us into spreading their message. In this view, the western science *enlightenment* meme ‘have courage to exercise rational enquiry’ competes with the western religion *faith* meme ‘have faith in the absence of evidence’. But the subsequent evolutionary school of thought generated by Dawkins’ thinking, *Memetics*, was later criticised as non-scientific evolutionary story-telling and, worse, fundamentally flawed tautological thinking (Laland and Brown, 2002). Few evolutionary scientists now advocate any simple-minded gene-eye or meme-eye view regarding *what is* and *what is not* functional in the dynamic set of relations between human belief, human action, and the evolution of the species (Richerson and Boyd, 2005). And in the context of modern evolutionary science, many of the problems associated with understanding the functional significance of ideas, values, and beliefs are now understood to be problems for psychological science.

In reality, many different evolutionary stories about the development of religion and its functional significance can be generated, but most of us find it difficult to see clearly in this narrative field because the science of cultural evolution itself is poorly developed (Laland and Brown, 2002). Some argue that the idea of an “afterlife” is culturally recurrent, proximally driven by emotions, often implicated in social and reproductive matters, and ostensibly fitted to the ecological niche in which humans developed (Bering, 2006). Others suggest that spirituality has become implicated in survival of the species via the relations between spirituality, sociality, morality, and meaning-making (Cacioppo, Hawkey, Rickett, and Masi, 2005; Richerson and Boyd, 2005). To a certain extent, all the stories generated thus far are simple-minded, even those that sound plausible.

STORIES, STORIES

Ensuring human survival is dependent not only on the ability of individuals to reproduce but on the success of their children to reproduce. As the saying goes,

biology flows downhill: parents strive to ensure that conditions are optimal for their children. And because evolution along the human lineage saw an ever increasing period of dependency before the developing person reached their reproductive prime, social emotions associated with care duties became increasingly important. Also, because human beings evolved in a tribal context, where care duties were distributed within a large social circle, reproductive success necessitated increasingly organized networks of social support, moral systems of acceptable and unacceptable behaviour, and principles of social reward and punishment (Gintis, 2005; Richerson and Boyd, 2005). Following this logic, Bering speculates that evolution of the idea that *absent agents can perceive our behaviour and reward or punish us as a consequence of our behaviour* may have been critical for the evolution of both altruism and inhibitory control (Bering, 2006), and, by extension, everyday punishments dished out by authorities to individuals ‘for the good of the people’ (Boyd, Gintis, Bowles, and Richerson, 2003) may have become linked with systems of belief about ‘spiritual authorities’ who proscribed certain behaviours as a matter of principle.

Cacioppo and colleagues (Cacioppo et al., 2005) see similar, associated functional relations. They propose that many of the positive correlates of spirituality -- kindness, empathy, compassion, mercy, trust, justice, love, friendship, hope, and so on -- emerged in parallel with the human instinct for sociality and meaning-making. We can extrapolate from this view. For example, the basic motivation referred to above ‘care for the next generation’ – *generativity* in Erik Erikson’s scheme (Erikson, 1978) – became increasingly generalized and differentiated, and those who mastered the art of altruism and generativity had more offspring who survived to rear children. And a broader social sensibility, including a sense of connection with one’s ancestors and a sense of responsibility for the care of one’s ancestors, implied that worldly sociality and certain categories of other-world spirituality were fused in our cultural evolution.

And then there is the idea that religion somehow co-opted our predisposition for meaning-making. For certain, many developmental psychologists argue that adult development is not simply about survival, reproduction, and maintenance of control over the environment, but also meaningful and purposeful existence (Braam, Bramsen, Van Tilburg, Van der Ploeg, and Deeg, 2006; Busse, 1985; Cole, 1984; Marcoen, 2005; Moody, 1985; Moore, Metcalf, and Schow, 2000; Pargament, 2002b; Pargament et al., 2005; Wong, 1989). Meaning and purpose in life is often described in narrative terms by reference to a connection between the person and the social and spiritual world (McAdams, 2006; McAdams et al., 2004; McAdams and Destaubin, 1992; McAdams, Diamond, Aubin, and

Mansfield, 1997; Peterson and Seligman, 2004)⁷, and theories that define successful human development in terms of an individual's efficient and effective *doing* -- mastery over action and the human environment (Heckhausen and Schulz, 1995) -- often fail to address *being and purpose* in any meaningful way. But if we assume that a culturally-given set of ideas, beliefs, and values can somehow offer the developing person both increased control over action and the human environment *and* a sense of coherence or meaning and purpose, then there is no reason to assume that meaning-making cannot be integrated into a more complex evolutionary account of human system functioning (Sheldon, 2004), and we can readily speculate about the function of religion in this regard.

Evolutionary thinkers often note that our motivations and emotions evolved in the context of efforts to adapt to group living, not simply as a result of efforts to survive and reproduce in an unstable environment. This social context implied a delicate balance be maintained between cooperation and competition – between ‘getting along’ and ‘getting ahead’ (Hogan, 1982). As religions evolved, they provided a set of beliefs and behavioural practices that facilitated getting along and getting ahead, which in turn helped regulate the smooth social functioning necessary for adaptation to (and control over) the environment. In the course of providing the motivational, emotional, cognitive, and behavioural glue that facilitated adaptation to the physical environment and the social world, these belief systems also attempted to explain the relation between the physical environment, the lived social world, and the spirit world. In this sense, meaning-making became an implicit and explicit function of religion. As a whole, then, religion became the *unifying meme* that established meaning and purpose in people's lives. And even today, although orthodox religious faith has declined in the western world, the search for meaning and spiritual connection is still common (Heelas, Martin, and Morris, 1998).

⁷ Notably, even science, which disavows much of the established meaning and purpose associated with ‘the spiritual world’, has a clear social function and the distinction between the social meaning and purpose granted through the practice of science and the meaning and purpose granted through a connection with ‘the spiritual world’ is not always clear cut. In fact, the cultural evolution of both science and religion are intimately interconnected via their many shared pro-social values associated with promoting the health and well-being of the population. Naturally, both science and religion have often failed historically in their endeavour to benefit humanity. Translating any set of ideas, values, and beliefs into action that facilitates the ‘greater good’ in contexts multifarious is a genuine challenge of systems thinking. A discussion of the psychological causes and consequences of failures in systems thinking is beyond the scope of this book.

THE GOOD, THE BAD, AND THE UGLY: ON THE STORY GOES

Religion is a part of culture. Culture is a part of biology, and how culture is acquired, used, and transmitted is a function of universal features of human action, which, for example, makes some people more likely to be imitated, some moral values more appealing than others, some ideas more difficult to learn, some cultures more readily sustainable (Richerson and Boyd, 2005). In the context of western enlightenment, some aspects of the spirituality meme that were attached to established systems of religious belief and practice were weakened through cultural selection (Stewart, 2006), but not all aspects. If all aspects of the spirituality meme were to weaken in line with enlightenment-related weakening of belief in God (at the population level, in Europe), then one might expect scientists to discard the term “spirituality”, but they do not. Scientists continue to state that spirituality is a central feature of our personality, our character, our progressive development toward wisdom (Cacioppo et al., 2005; Marcoen, 2005; Pascual-Leone, 2000; Peterson and Seligman, 2004; Piedmont, 1999). Why this evolving dissociation of religion and spirituality? Perhaps, as theories of cultural evolution imply, it is the *beneficial* correlates of the spirituality meme -- the positive memecorrelates -- that are likely to be retained by culture, whereas the non-beneficial correlates -- the negative memecorrelates -- are likely to be dropped⁸.

During the process of cultural evolution, much of what earlier periods in history accepted as functional -- creation myths, the God-given nature of specific moral beliefs and social practices, and so on -- was increasingly challenged. At the same time, many culturally-accepted definitions of “being spiritual” remained, were desirable, and, in the era of evolutionary science, were still open to cultural selection because of their relationship with successful development: pro-social behavioural tendencies, quality social support networks, strategies for coping with loss, strategies for healthy living, intrapersonal and interpersonal coherence, meaning and purpose, transcendent conscious experiences, and so on. Culture, folk psychology, and mainstream scientific psychology continues to inform the developing person of the adaptive and maladaptive correlates of “being spiritual”, and cultural evolution continues to act upon these belief systems.

⁸ Cultural evolution works at a population level. Ultimately, the ‘majority’ defines what an acceptable idea, value, and belief should look like and, naturally, any ‘positive memplex’ thus defined may not necessarily benefit everyone (e.g., minority groups may not benefit from ‘socially supportive institutions’ designed to ‘support the majority’). Also, the function of ideas, values, and beliefs is context-sensitive and there is no simple one-to-one mapping from the structure of ideas, values, and beliefs to the functional process of thinking in action. Perhaps it is for this

And if we embrace a relatively simple-minded view of cultural evolution for a moment and seek to understand the relationship between these positive spirituality memecorrelates and lifespan development, then, advancing upon the argument by Cacioppo and colleagues, we can speculate that there are two life periods when the positive memecorrelates of spirituality will tend to have their greatest impact: early childhood and old-old age (see figure 1). During early and late life periods people have fewer biological and psychological resources, and they generally have less control over how material, social, and cultural resources are distributed - they are thus more dependent (Baltes, 1997). Therefore, if positive memecorrelates of spirituality are manifest in the population -- for example, interpersonal strengths of kindness, empathy, compassion, mercy, trust, justice, love, and friendship -- those people who have internalized the corresponding memeplexes may be more likely to behave in ways that benefit people most in need of quality social support (Greenwald and Harder, 2003; Mikulincer and Shaver, 2005; Sprecher and Fehr, 2005), and this behaviour pattern will be reinforced by those who wish to maintain social order, because maintaining social order implies reinforcing pro-social behaviours (Boyd et al., 2003). As part of a broader social-cultural exchange process, the collective resources of the population will presumably be bolstered and the spirituality meme will thus be reinforced at the population level (Henrich and Boyd, 1998; Sosis and Bressler, 2003; Williams, 2001). At the same time, a spirituality memeplex with positive interpersonal memecorrelates may have to compete with another memeplex that deactivates positive interpersonal strengths and invokes less social support. For example, some commentators argue that the memeplex “aggressive capitalism” acts to extinguish many of the behaviours described as interpersonal strengths above (Phillipson, 1998) -- and when aggressive capitalism dominates our social force fields, the weakest suffer first whenever there is a recession; priority given to maximizing returns distorts the socially identified needs of younger and older people; the commodification of labour breaks families apart; the sentiment amongst the cynics becomes that of ‘older people are a selfish welfare generation’; and so on. However, the spirituality memeplex might gain in prominence and strength as a consequence, because it comes to be increasingly valued ‘in relation to’ an increasingly toxic and devalued competitor (the “aggressive capitalism” memeplex).

And if we continue to put this positive psychology spin on our theory of cultural evolution, we might argue that the greater the degree of positive

same reason that religions have attempted not only to define and control memeplex development but also the contexts wherein the meme system is functional.

correlation between any given spirituality memplex and (1) positive states of being, (2) socially adaptive strengths of character, and (3) socially supportive institutions, the more likely it is that the memplex will be reinforced within the population through cultural selection. Conversely, those correlates of the spirituality meme that are deemed irrational or somehow non-functional in the modern world will tend to be weakened, deselected, perhaps slowly at first, until, as Dawkins says, a ‘critical mass’ of thinkers is able to clearly distinguish the rational from the irrational in their system of beliefs (see figure 1).

We cannot deny that there are many forces at play shaping the co-evolution of our genes and our culture (Hogan, 2006b), and, similarly, we cannot deny that there are many forces at play in shaping our lifespan development (Baltes, Lindenbeger, and Staudinger, 1998), but if culture supports positive health behaviours, time for meditation, a sense of coherence, meaning and purpose, mindfulness and acceptance in the face of unavoidable pain, and so on, then this is good. If culture supports integrity, kindness, fairness, forgiveness, modesty, self-regulation, gratitude, hope, and so on, then this is good. If culture has built (or is in the process of building) socially supportive institutions for future generations of all ages, then this is good. To the extent that spirituality bolsters these positive tendencies on a population-wide level, then spirituality is good. Naturally, a memplex other than a spirituality memplex can produce similar (if not identical) positive effects. For example, understanding *why* specific behaviours are beneficial may provide sufficient reason for people to select them. In other words, scientific accounts of human action can provide a scaffold upon which principles of behavioural control are pursued (Carver and Scheier, 1998; Chiesa, 1994; Zautra, 2003).

Many schools of thought in psychology carry some form of “humanitarian science” meme. For example, the positive psychology movement seeks to develop a scientific account of how positive emotions, character strengths, and supportive social institutions can benefit the developing person (Aspinwall and Staudinger, 2003; Fredrickson, 1998; Hogan, 2005b; Keyes and Haidt, 2003; Peterson and Seligman, 2004; Seligman, 2002), with the ultimate objective of promoting these same positive outcomes in culture. This account need not invoke any religious or spiritual principles, even if the scientific movement itself does work to study the potential benefits of religion and spirituality.

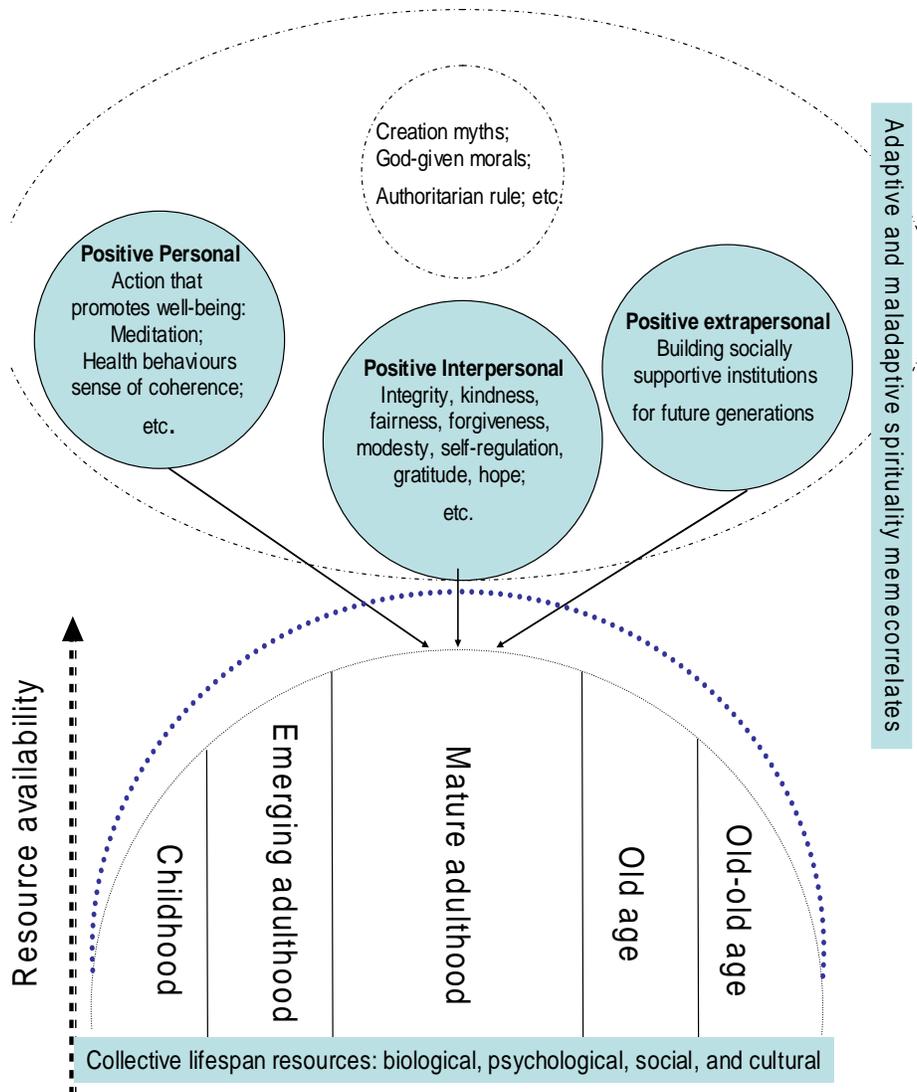


Figure 1. The relationship between positive spirituality meme-correlates and collective lifespan resources⁹.

⁹ Three points: First, to the extent that maladaptive memecorrelates detract from effective social functioning via the availability, management, and distribution of lifespan resources, they will be negatively related to 'successful ageing'. In this analysis we ignore the fact that religious faith sometimes provides justification for greed, war, bigotry, and terrorism (see Dawkins for an excellent analysis of these negative memecorrelates). Second, at the population level, societal

A central question is whether or not a population working with a “humanitarian science” meme can produce relevant “beneficial effects” (e.g., promoting meditation) with the same level of efficiency and efficacy as do populations working with simpler “human spirituality” memes. This is an empirical question, and not one that we can answer directly here, as it involves comparing the efficiency and efficacy of cultural influences within different sub-cultures where science and spirituality are clearly differentiated.¹⁰

When it comes to understanding optimal human development, although individuals will naturally select actions from the full range of what culture offers (Heckhausen and Schulz, 1993, 1995), this does not detract from the importance of culture per se. Culture sets up many systems of contingencies that shape human action. People from different cultures entering a common environment carry different behavioural norms (Greeley and McCreedy, 1975). And while substantial *individual* variation in core personality traits and intelligence is genetic, little behavioural variation *among groups* is genetic.

Importantly, people will imitate the ideas, values, and beliefs that are most common and most successful in their culture. Although many animals, including our closest relatives, show evidence of social learning (Tomasello, Call, Nagell, Olguin, and Carpenter, 1994; Tomasello, Savagerumbaugh, and Kruger, 1993), only humans show much evidence for the kind of imitation that drives cumulative cultural evolution. While adult chimpanzees tend to *emulate* an observed method of tool use, young children closely *imitate* the model, paying particular attention to the details of how the tool is used (Call, Carpenter, and Tomasello, 2005). Children sometimes imitate so faithfully that they continue using an inefficient technique long after chimpanzees abandon it in favour of a more efficient strategy (Tomasello, 1996; Tomasello, Kruger, and Ratner, 1993)

Mathematical models suggest that imitation increases the average fitness of learners by allowing organisms to learn more selectively, learning when learning is cheap and accurate, and imitating when learning is likely to be costly or

management of the distribution of positive spirituality memecorrelates is directed from the centre of the lifespan outward. Mature adulthood is the life period when care duties are at their peak. Mature adulthood is the life period when psychological resource availability peaks. Mature adults bring about the most significant changes in society. Emerging adults and older adults also play a major role – children and the old-old (85+) play a lesser role in directly fashioning ongoing social/cultural changes. (This assumption is derived from the logic of Lifespan theory as developed by Paul Baltes.) Third, to the extent that positive spirituality memecorrelates enhance availability, management, and distribution of resources, there is potential for population-wide increases in collective lifespan resources, thus increasing the probability of ‘successful ageing’.

¹⁰ To my knowledge there are no studies that have been capable of comparing different cultures in this regard.

inaccurate, or when environments are unpredictable. For those who can flexibly shift from the strategy 'imitate' to the strategy 'learn', imitation raises average fitness by allowing learned improvements to accumulate from one generation to the next (Boyd and Richerson, 1995).

These imitation strategies can be thought of as heuristics -- mental shortcuts that help us to make fast and frugal decisions. Heuristics bias and canalize action and have been shaped by natural selection for a reason. Importantly, models that combine the effects of biased social learning, individual learning, and natural selection to estimate the net effects of these processes on the joint distribution of cultural and genetic variants in a population, suggest that adaptation often forces the development of a strong *conformity bias* (Henrich and Boyd, 1998). Social psychologists and evolutionary psychologists (Pinker, 2002) recognize the universal power of the conformity bias, and although individualist cultures sometimes consider conformity to be a negative trait, a conformity bias would not have evolved unless it was beneficial at the population level. One way or the other, religious or spiritual worldviews that are held by the majority of the population in one cultural context are likely to be imitated by those developing in the same cultural context.

Not only are people biased to imitate the majority, they often imitate successful, prestigious people (Henrich and Gil-White, 2001; Rogers, 2003; Ryckman, Rodda, and Sherman, 1972). Mathematical models suggest that this prestige bias can lead to an unstable, runaway process and produce exaggerated characters, analogous to the process that gave rise to peacock tails (Boyd and Richerson, 1985). Understanding how imitation heuristics are employed (and the conditions that foster various imitation biases) is necessary to understand the rates and direction of cultural evolution.

Spirituality memes are omnipresent in modern culture, and it has been argued that certain meme-correlates of spirituality -- sociality, morality, meaning-making -- are associated with successful development. As the children and adults of modern culture develop, they will continue to assimilate and modify the ideas, values, and beliefs of culture. And although massively varied in modern culture, the meme-correlates of spirituality will continue to change as history marches forward.

But how should we -- you and I -- conceive of spirituality? Certain categories of spiritual experience -- a sense of connectedness, universality, and fulfilment (joy and contentment) that result from personal encounters with a transcendent reality -- are neither correct nor incorrect when considered as pure phenomenal experiences; they are, however, more or less functional when they co-operate with higher level problem-solving and decision-making mechanisms that coalesce in

the unfolding of action sequences. But this depends on the goal being pursued. Naturally, one can experience spiritual well-being -- joy, awe, and unity -- in the realm of pure phenomenology, and positive emotions granted by way of this experience may be very beneficial in many ways (Fredrickson and Losada, 2005). But the positive emotion granted as a consequence of this spiritual well-being does not imply quality coping, problem-solving, or decision-making skills in all situations (Kaufmann, 2003). Also, as we learn to respond to an increasingly complex set of contingencies, the original spirituality we first conceived of will invariably change, adapt, or perish. Some thinkers prime us to the challenge: they believe that successful development involves moving toward greater levels of integrated complexity (Labouvie-Vief and Márquez González, 2004), where emotion and cognition work well together in a steadily increasing range of different contexts. How does spirituality survive as a working concept in this developmental context?

In the closing sections of his book, *The God Delusion*, Dawkins hopes that we will “emancipate ourselves” and achieve an intuitive and mathematical understanding of the very small, the very large, and the very fast. He sees humanity as pushing against the limits of understanding and he hopes eventually to discover that there are no limits. But, surprisingly, Dawkins says little about the psychological, functional significance of arriving at this state of understanding: it is unclear what he considers will be the effect on human consciousness, human behaviour, and human social functioning. Understanding the very small, the very large, and the very fast is one thing; understanding human conscious experience, human behaviour, and human social functioning is another thing. Spirituality is embedded in this field of activity. We will now move deeper into this field and think again.