Are Science and Spirituality Compatible?

The polarized climate of science being at odds with spirituality asks us to choose a side in the dispute, and our choice dictates how we see the world and how the world sees us. Though both worldviews have undoubtedly had both positive and negative impacts in the world, I want to call attention to dogmatism in the current scientific paradigm that is causing much physical and psychological harm. By promoting the view that the universe is devoid of value and meaning, this paradigm enables personal, interpersonal and environmental exploitation. The “true” existence of ethics, purpose, and other familiar non-physical phenomena that this worldview denies needs to be reincorporated into our concept of reality in order to guide science in a positive direction, reduce the hostility between scientists and spiritualists, and create a more open-minded, responsible and fulfilled culture. The rift between the worldviews of science and spirituality can and should be healed for the advancement of both disciplines and the wellbeing of society.

Why is spirituality important when we have science to explain everything? First, I think it will be helpful to clarify the difference between spirituality and religion. Two prominent scholars in religion, philosophy and science, Harald Walach and K. Helmut Reich elegantly define religion as “the form-giving and clothing of spiritual experience” (429). Religion represents order, traditions and ritual, and these vary based on context. All religions have spirituality, the experience of transcendent (beyond physical) reality, at their heart. Religion helps people share and express spirituality, but is not crucial for its existence. Spirituality involves personal connection with and contemplation of mystery or the divine, through which we may find a sense of purpose in the world and develop beliefs, values, and personal agency. These are all important aspects of the human experience, and are no longer considered to be part of Western science.
This was not always the case. Western science came of age in an environment dominated by a Christian belief system that supplied all explanations of how the world worked. Scientific discovery was at first inextricable from spiritual understanding. As ideas and technology developed into the period known as the Enlightenment, the rational methods of scientists led to their questioning of religious dogma. This brought trouble with religious authorities, but also a sense of freedom from religious ideals. As it freed itself from the constraints of religion, however, science developed its own dogma and assumptions, which can be held to with great inflexibility.

The dogmatic scientific worldview, known by some as “scientism,” denies transcendent reality and instead upholds a reductionist view of the universe—that everything that exists can be broken down into particles of matter interacting arbitrarily according to natural laws (Walach and Reich 427). Reductionism arose as the fields of chemistry and physics developed and became increasingly intertwined with our understanding of biology. The logic is based on a hierarchy of phenomena, where biological systems are nothing more than the sum of their chemical constituents, which in turn reduce to particle physics. This interpretation of reality is a useful way to simplify complex systems and a tool for understanding their inner workings. But in this view, love, meaning, function, and all other non-physical phenomena can be attributed to the mundane constructs of chemical reactions in our brains, and are therefore not “real” (Kauffman x). Many reductionists claim that science has replaced the need for the sacred (“Science Refutes God”). The logic behind this claim is understandable with our current capacity to study brain function and the physical states associated with transcendent experience, but it must not be taken at face value. A scientific worldview that describes life as merely the functioning of biological computers is lacking in important parts of our experience.
There are grounds for incorporating transcendent levels of reality into the scientific worldview. Stuart Kauffman, a theoretical biologist and complex systems researcher, offers one approach. He argues that emergent properties, those that develop from matter but are “more than the sum of their parts” such as values, consciousness and function, are transcendent in nature. These phenomena are non-reducible and therefore unable to be described by natural law. But this non-reducibility does not rob them of their realness (x). These phenomena are significant facets of human life that we all experience and have common knowledge of, regardless of our spiritual identity. Scientific analysis may never reach the domain of these emergent properties. But if phenomena that are definitive to our lives do not fit into our constructs of reality, then it is time to redefine the boundaries.

The growing view that science can explain everything has created contempt for faith-based understanding. Beliefs not based on empirical evidence have been lumped together by scientism as relics of ignorance. As a result, we encounter constricted ideas of “God” and “religion.” Illustrating this effect, the recent Intelligence Squared debate “Science Refutes God” featured two atheists arguing against two Christians. The only spiritual beliefs considered were those of Christianity, though it was barely acknowledged that this was how the debate would be framed (IQ2 debates). The imbedded assumption this framing creates reinforces the mainstream view of religion as one particular set of beliefs in the context of its polarity to science. Similarly, in a recent article in the New York Times, an evolutionary biologist argued that “students need to know why science and religion cannot be reconciled” based on the same conflation of religion and spirituality (Barash). This attitude ignores many faiths, denies possibilities of their collaboration with science and shuts down conversation. It is especially hard on students to have this bias present in a figure of scientific authority when they are likely to be grappling with their
worldview as their minds are being expanded by the wonders of science. Instead of allowing scientific understanding to integrate with and transform spiritual understanding, these students would feel pressed to choose one side or the other.

An important influence behind assumptions about religion is the media’s attention on the hostile Evolution vs. Creation education battle in recent years. This clash over what we teach our kids makes sense, considering that 77% of Americans identify as Christian, and creation, the belief that God made the world and all life, is central to the Christian faith (and many others) (“Evolution, Creationism, Intelligent Design”). In addition, many people believe that all beings were created as they are today, which fundamentally conflicts with evolution. This foundational theory of biology states that all life arose from a single-celled ancestor through changes in genetics over billions of years. Americans are split over these beliefs. Statistics from May 2014 show that 42% of Americans favor creationism and reject evolution. But 50% believe in evolution, whether with God’s influence or without (Newport). This poll does not state which God is being considered, but in the context, the majority of people polled probably assumed a supernatural creator God if not the Christian God. It is noteworthy that even in these confines, 31% responded with the belief that evolution and God coexist. Even within Christianity, which has been portrayed as the polar opposite of science, there are many people who merge the two ideas in their worldviews.

Though evolution vs. creation is a significant controversy of our time, we must consider a wider range of spiritual beliefs to begin to explore the spectrum of possible relationships between science and spirituality. There are abundant modes of spirituality that do not conflict with scientific theories. Kauffman, for example, defines God not as a distant ruler, but as the force of perpetual creativity and transformation that drives all life (xi). He presents a free and open
concept of God with many possible variations. Pantheism, Taoism, Buddhism and Paganism are examples of organized religions that appear to have no qualms with scientific explanations (though they might have a problem with “scientism”) (Harrison 11-18). These may seem like fringe beliefs to some when the vast majority of people in the world practice Abrahamic traditions, but as our society is increasingly interwoven with the rest of the world, these alternative beliefs are becoming more present in our awareness. Some traditions are more difficult to reconcile with modern scientific understanding than others. Two main factors that lead to disagreement with science are the level of God’s agency and how texts are interpreted. The more of an agent God is considered to be, having thoughts, feelings, beliefs, and direct interaction with the material world, and the more literally events described in sacred texts are interpreted, the more likely the beliefs are to disagree with science (Glennan 802-807). However, there are many viable alternatives to God as an agent, and many religious people who interpret texts symbolically. Through promoting open-mindedness and compassionate dialogue, integration and growth are possible for scientific and spiritual worldviews.

One way we can promote understanding is by considering the subjectivity involved in our viewpoints. Science works within the material world through gathering empirical evidence and reasoning based on that evidence. Through this process, we make statements about objective reality, which exists outside of anyone’s personal experience. But Joe Rosen, a theoretical physicist, points out that “what knowledge we possess…is obtained only indirectly…via our physical senses….And since our perceptions are no more than the stuff of our minds, we can’t avoid the conclusion that our knowledge of the objective world is subjective” (4). He argues that as far as knowledge goes, the closest we can get to objectivity is intersubjectivity—where enough people agree about their perceptions of a phenomenon through reproducing results and
having similar observations that we grant its objectivity (Rosen 4). This means that our scientific knowledge is based on collective beliefs, not so different from spiritual ones. Likewise, Dinesh D’Souza, arguing that science does not refute God in the Intelligence Squared debate, defines the laws of physics as “generalizations that reflect the limits of human knowledge” (“Science Refutes God”). We must keep in mind that as concrete as scientific theories may seem, they cannot describe everything. Our scientific models are based on human perceptions and logic, and they are often rejected and replaced as new research changes our understanding.

Spirituality, on the other hand, focuses on transcendent reality and its relationship with the material, often through subjective experience. Communication of these experiences with others through dialogue, art, music, ritual, and other forms of expression builds shared experience, or intersubjectivity. In this light, we can see that both science and spirituality are informed by subjective and intersubjective views of the world, and therefore neither provides knowledge that can be accepted with absolute certainty. If we start probing what we deem true, what we denounce as superstition, and on what bases, we may see the foundation of these beliefs is as insubstantial as science has found solid matter to be on the atomic level. While science provides invaluable information about the world, it shouldn’t be looked to as the only source of truth.

Science and spirituality can work together to create a deeper understanding of the world, and this union is indeed critical for personal and collective health, fulfillment and wellbeing. Subjective and intersubjective experiences are both a “real” part of life as we know it. Our knowledge will always have limits, but the synthesis of diverse methods of investigation can lead to unexpected insights. Walach and Reich postulate that scientific ideas come about in the way that spiritual ones do. Though they are explored through controlled experiments, they are
conceived from wild sparks of intuition and revelation (437). Hence, even hard science originates from the non-scientific realm of creativity. Furthermore, spirituality helps us develop valuable “emergent” qualities that are just as important for our full experience of the world as scientific understanding is.

Emergent qualities such as values and ethics are not only important for our interpersonal wellbeing, they are crucial for ensuring that science is conducted wisely. As his Holiness the Dalai Lama observes, “unless the direction of science is guided by a consciously ethical motivation, especially compassion, its effects may fail to bring benefit. They may indeed cause great harm” (Bstan-dzyn-rgya-mtsho 9). The current scientific paradigm holds the belief that science is inherently valuable. Instead, I want to suggest that science is only as valuable as its benefit to the web of life. There are many complex ethical dilemmas in science today that require deep contemplation. How far should we go with our genetic modification of human embryos? Are the proposed economic benefits of the Keystone XL pipeline worth the environmental cost? Where should we draw the line with animal testing? Contrary to the idea of “valueless science,” each scientist who works on a project is contributing to its effects. We need to hold ourselves and others accountable for the implications of our work. The work carried out in the name of science has a profound impact on all beings, and we must ensure that it is an intentionally positive one.

One common argument for relegating spiritual beliefs to antiquity is the notion that we created them to explain things that were once mysterious to us—how the universe came to be, what happens after we die, and why we are here in the first place. Now that science and technology have developed to the degree that they have today, we can presumably have faith that science could theoretically, in time, reduce all mysteries to quanta. Therefore, the concept of our purpose is itself an ultimately pointless construct. Lawrence Krauss claims that “we have no
need for purpose, so we have no need for God” (“Science Refutes God”). In this view, science has not only refuted God, but also purpose. But with the complex ecological, social and economic challenges we face today, it is more important than ever for us to consider our purpose, both personally and collectively; to develop our talents in order to effectively confront these problems.

Science and spirituality speak different languages, and it can be difficult to see how they relate to one another. Even still, if we expand our perspective of both worldviews, we will be more aware of where one picks up and the other leaves off, how they collaboratively form our concepts of reality, how they help or limit us, and how we can use both of their powers for maximum benefit. Reconciling spirituality and science will allow us to interpret and celebrate mystery without compromising scientific integrity. Spiritual engagement can enable people to seek beliefs, life-purpose and values without being confined by religious dogma. These values will be critical for keeping science in the service of life and wellbeing. Through the weaving together of spiritual and scientific methods of understanding and interacting with the world, we can build a stronger and more flexible culture, more prepared to creatively face the world’s challenges.


