

Science and Spirituality: Mysteries, Obstacles, Integration

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Mysteries

Several fundamental mysteries and dilemmas for both science and spirituality are discussed below.

The Origin of Life and the Universe

The origin of life has not yet been explained scientifically, but most scientists assume that it will be explained within the framework of evolution. However, other scientists, such as molecular biologist Franklin Harold (2001) believe that new realms of scientific understanding will be needed to explain the origin of life.

The foundation for evolution is the genetic code and biological mechanisms to store and reproduce genetic information. Reproduction of a living cell requires a myriad of biochemical processes in exquisite order with complex regulatory mechanisms. These intricate biological processes are assumed to have developed through evolution.

However, evolution as currently conceptualized could not occur in the absence of such processes. Therefore, some process outside the logic of evolution appears to be needed to explain the origin of life and the origin of the biological mechanisms underlying evolution. Evolution makes sense once these mechanisms and an associated drive for reproduction are in place. But the origin of these living processes from the mineral realm remains a profound mystery.

This is an example of the general principle that for any scientific theory or model, questions can always be asked that are outside the logic of the system. The most basic question is what caused the system to come into existence. Questions about the origin of life, origin of electromagnetism, origin of the big bang, origin of the universe, etc. are in this category.

After discussing Godel's Incompleteness Theorem and related topics that more formally address this principle, physicist Paul Davies (1992) concluded:

in the end a rational explanation for the world in the sense of a closed and complete system of logical truths is almost certainly impossible. We are barred from ultimate knowledge, from ultimate explanation, by the very rules of reasoning that prompt us to seek an explanation in the first place. If we wish to progress beyond, we have to embrace a different concept of "understanding" from that of a rational explanation

(p. 231).

Science is an ever expanding base of knowledge, but it cannot answer ultimate questions about existence. As knowledge increases, the unanswered questions shift, but basic mysteries will always remain.

For this and other reasons, science cannot provide convincing evidence that supernatural agencies had no role in the creation of life or the universe. However, most scientists are not willing to consider such ideas.

In fact, the differing world views of science and spirituality appear to reflect basic differences in disposition among people and innate preference for certain types of explanations. Davies (1992) commented "There is no doubt that many scientists are opposed temperamentally to any form of metaphysical, let alone mystical arguments" (p. 251).

There does not appear to be any way for either the scientific or spiritual perspective to prevail over the other through logic, evidence, or force of argument. A scientist's commitment to physical laws and disbelief in supernatural agencies is a matter of faith, speculation, and temperament that cannot be proven with scientific evidence.

The Existence of Evil and Imperfections

Of course, the same principles of incomplete understanding apply to spirituality. One of the basic mysteries and dilemmas for spirituality is to explain why the world has so much evil, suffering, and imperfection if there is a supernatural agency that aspires for the world to have a certain state of goodness. This is particularly a problem for those who believe in an omnipotent God who is directly and continually involved in human activities.

The common contortions to reconcile the existence of both evil and a powerful God basically require that (a) God was incompetent in creating the world, or (b) God finds evil and human suffering to be entertaining, or (c) humans cannot expect to understand the mysteries of God. All of these options strike me as inconsistent with the basic premises of most spiritual belief systems.

Here again, the various explanations for the unknowable appear to reflect differences in disposition. None of the arguments can be expected to prevail over the others.

Miracles and Paranormal Phenomena

Throughout history, events that were claimed to be paranormal miracles have had a major role in convincing people of the validity of religious revelations and in attracting followers to spiritual leaders. These miracles have been considered tangible evidence for supernatural beings or powers. Miracles have had a major role in most of the world's religions and have been particularly conspicuous in Christianity (Woodward, 2000).

If a supernatural agency repeatedly intervenes in the physical world as proposed by some spiritual beliefs, we would expect some observable evidence that might be evaluated scientifically.

Research on prayer is an obvious candidate. Dossey (1993) has written extensively arguing that research supports the paranormal efficacy of intercessory prayer for healing.

However, two recent large, well funded studies carried out by researchers at prestigious research institutions failed to support the efficacy of prayer (Benson, et al., 2006; Krucoff, et al., 2005). By the usual standards of medical research, these studies would be considered as near conclusive evidence that the prayer hypothesis is not valid.

The research cited by Dossey and others are basically in the domain of parapsychology and have the same problems of inconsistent results as other types of parapsychological studies. After over 100 years of research and many hundreds of experiments, the investigation of psychic phenomena has not produced a useful, reliable finding or experimental evidence that is convincing to most scientists (Kennedy, 2003).

However, the parapsychological findings are mysterious because the outcomes sometimes seem to be capricious or evasive rather than just chance results. The initial results may support the experimenters' hypothesis, but another study may give results that are significantly opposite to what the experimenters intended. The results sometimes seem to be defiant or a trickster.

Experimental parapsychology assumes that psychic phenomena are a human ability that is controlled by the motivations and intentions of living persons. This assumption has not produced scientific progress. Parapsychologists generally ignore the possibility that paranormal phenomena are produced by a supernatural agency rather than the mind and motivations of living persons.

People continue to have seemingly spontaneous paranormal experiences that absolutely convince them there is a spiritual realm with supernatural agencies. However, these experiences are not something they can control or reliably demonstrate in experiments or use for self-serving materialistic purposes. It appears that such phenomena are constrained to be mysterious and not controllable for self-serving purposes. The primary effect of the experiences is to stimulate and enhance interest in spirituality.

The lack of control and lack of identifiable materialistic function prevents scientific progress with these phenomena. People with dispositions that are attracted to science naturally tend to be skeptical of such phenomena. On the other hand, people who are mystical by nature find such phenomena fit nicely into their world view. Here too, it does not appear to be possible for either perspective to prevail over the other.

Obstacles

It appears to me that the greatest obstacle for both science and spirituality is that people have a pervasive need to feel superior to at least some other people. This seems to occur among all personality types. This need for superiority can prevent proponents of science from being objective and rational, and prevent proponents of spirituality from being ethical and compassionate. The drive for superiority manifests in the pervasive competition and efforts to achieve dominance in politics, business, corporations, sports, and even academics.

The most conspicuous evidence for this point is the long history of hostility, violence, and conquest in the name of religion. Part of the justification for these self-serving, aggressive actions is superiority over the people being attacked. Of course the superiority, aggression, and violence are not limited to religious contexts. Atheistic communist governments have displayed some of the most violent, genocidal behavior in human history.

Fundamentalist religions explicitly believe that they are superior to people with different beliefs and values. People with mystical tendencies also often feel that they are superior to others because of their personal experiences. They view an interest in mysticism as the highest form of spirituality. However, it has become clear that the occurrence of transcendent experiences does not necessarily indicate ethical behavior, compassion, wisdom, integration or other characteristics normally associated with spirituality (Kornfield, 2000; Zweig, 2003). In fact, it has been common for the sense of self-importance associated with such experiences to result in appallingly unethical and hypocritical behavior among spiritual teachers in the U.S.

Similarly, scientific writings widely assume that rational, scientific perspectives are the best way to approach life and are the only valid form of understanding. Outspoken atheists and skeptics of the supernatural often display ridicule and hostility in their efforts to establish their superiority. They also tend to have an authoritarian approach to science that is blind to the limitations of science.

Writers have devoted thousands of pages to discussing and debating what is the highest form of spirituality and whether a scientific or spiritual worldview is better (e.g., Wilber, 2000). It appears to me that these efforts generally result in each writer claiming that his or her personality and associated values would be the best for all people. This gives each writer a sense of superiority, but the claimed superior characteristics are not convincing to those who want to believe that their own characteristics and values are the best.

The motivations for superiority and aggression presumably are part of the evolutionary legacy of humanity. They would have advantages in an environment of intense competition and survival of the fittest. Other manifestations and implications of these motivations are discussed in the next article "Human Nature, Aggression, Politics, Religion, and Wisdom."

However, these motivations can hinder the cooperation and synergy that may provide greater advantages for all parties and have been widely apparent in the evolution of living systems.

Integration

The common denominator for spirituality is that it gives life meaning and purpose. Different people find meaning and purpose from different beliefs, values, and activities. This obvious fact is irreversibly ingrained in human genetics and culture and contributes to the diversity that is the basis for social and scientific evolution. Yet, conflicts among people are often a direct result of the failure to accept and respect this diversity among people.

The instincts for superiority and aggression that underly the failure to accept and respect others are generally counterproductive in the modern world. Proponents of rationality and science and

proponents of spirituality and the supernatural share this evolutionary legacy and its adverse effects.

Human consciousness offers the potential for human society to move beyond the legacy of aggression and superiority. This will require a culture of respect and cooperation that reduces instinctive feelings of threat. Without the bias for superiority, proponents of science and proponents of spirituality can realistically appreciate and optimize the contributions, limitations, and complementary aspects of science and spirituality.

This is a pragmatic, humble approach for both spirituality and science. It pragmatically recognizes that answers to ultimate questions and a sense of meaning if life are subjective and cannot be imposed on others or make a person superior to others.

In finding meaning and purpose in life, for some people the pursuit of science is enough; for others it is not enough and the pursuit of spirituality is essential. Similarly, different forms of spirituality are appropriate for different people. These simple yet profound differences can be handled with awareness and respect. Science and spirituality are both products of consciousness that have potential to create greater understanding and contribute to making the world a better place. Both can be sources of great great evil if misdirected.

A scientist's faith that physical laws are the sole causes in the universe and another person's faith that supernatural agencies exist are both metaphysical assumptions or myths about ultimate causes that are outside the scientific method. With humility, the underlying subjective faith in unprovable assumptions and the shared confrontation with mystery can be recognized as universal.

This respectful, pragmatic, humble approach should reduce extremism that can be harmful, such as a religious enthusiast who denies medical treatment for a sick child or a medical practitioner whose skepticism creates expectations that minimize the self healing of placebo effects.

Spirituality can also be viewed as human consciousness charting a path to what it wants to become or evolve toward. When the instinctive bias for superiority is put aside, a diversity of paths can be seen as healthy, just as a diversity of personalities and occupations is healthy.

People with aggressive, authoritarian personalities will, of course, continue to promote the aggression, superiority, and violence that has been the legacy of humanity. Society has to deal with these forces as best it can. Hopefully, these values will reflect a smaller and smaller minority of people who less frequently achieve political dominance. Unfortunately this legacy has become institutionalized in major religious traditions. However, these religious traditions also include the core values of compassion, tolerance, and altruism. Hopefully these core values can be increasingly emphasized in these traditions. The motivation to have authority and rules is probably a necessary aspect of seeking culture and community. It is the motivations for aggression and superiority that cause problems.

Spirituality often appears to be a manifestation of a deep need to be connected, as well to have meaning. The motivations for superiority and aggression can create a temporary sense of comrade-in-arms and purpose through conflict, but ultimately cause disconnection and separation. More profound and beneficial connections, including spirituality, seem likely to become increasingly prominent in human culture.

Science is providing humans with powers that historically would have been considered powers of God. We must aspire to rise to a level of understanding and ethics that can wisely manage these powers.

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Return to: [Integrating Science and Spirituality](#)

