

Searching for Coherence in a Complex World: Introduction to the Special Issue on Explanatory Coexistence

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Traditionally, science and religion have often been viewed in competition, with the belief that rational, scientific thought will win out in the end. This view is captured by the *secularization hypothesis*, which suggests that with advances in knowledge and technology, magical, religious, and other supernatural beliefs and explanations in a society would be driven out by more rational, logical, and scientific ones [Norris & Inglehart, 2004]. In young children, a similar view was endorsed by Piaget [1928], who argued that young children's thinking was dominated by magic, yet with age and experience, logical and rational thought replaced the magical thinking of childhood. To date, there has been little support for the secularization hypothesis, as supernatural beliefs seem to be as common as they were a hundred years ago. Likewise, the authors of the current volume provide compelling arguments that suggest that Piaget's view of the stage-like replacement of magical and illogical thought with scientific and logic forms of thinking is not supported. Rather, recent psychological research, much of it conducted by the authors of this special issue, actually suggests that supernatural and scientific thought coexists in the minds of both children and adults. The focus of this issue is on exploring how and when individuals endorse epistemologies that might be construed as stemming from a number of highly different world views. An overall goal of the issue is to explore the conceptual processes that enable individuals to endorse seemingly inconsistent epistemologies. Here we provide a brief overview of the contributions to the volume.

The issue begins with a paper by Eugene Subbotsky, a researcher who has been at the forefront of examining explanatory coexistence from a psychological perspective since the 1980s [Subbotsky, 1985]. His research has suggested that magical beliefs continue to coexist with more rational and scientific beliefs well into adulthood. In modern society, these magical beliefs, however, are pushed under the surface, surviving at an unconscious level of processing. At the core of Subbotsky's argument is that

thinking magically is natural, but this form of thinking gets suppressed in modern, technologically advanced societies. Yet magical thinking can never be truly driven out completely. Magical beliefs remain at the unconscious level unless triggered by particular contexts or situations, or clever experiments conducted by Subbotsky. He also suggests that magical beliefs serve a number of important functions, even for the rational adult. One of these functions is to stimulate creativity and the imagination. Subbotsky suggests that there may be an important link between magical thinking and advances in cognitive development more generally. This is a very different role for magic in the mind of the child (and adult) than purported by most current theories of cognitive development. But Subbotsky also argues that magical thinking plays important roles in normal everyday psychological functioning, not just cognitive development. Some of these influences can be negative, allowing individuals to be controlled or manipulated, but others may be quite positive, stimulating creativity and emotional comfort.

The issue continues with a contribution from Margaret Evans and Jonathan Lane who examine the coexistence of religious and scientific explanations and beliefs with respect to understanding the concept of human evolution. This topic, the understanding of evolution, is a traditional battle ground for those who have argued that science and religion are incompatible. As Evans and Lane discuss, religious perspectives on the origin of species (e.g., creationism) have been quite difficult, if not impossible to extinguish. Indeed, they provide data that many nonscientists find religious and scientific views on this topic to complement one another. Rather than placing these individuals into some sort of existential crisis, the norm with repeated exposure to evolutionary concepts is to incorporate these concepts into a hybrid explanatory framework that includes both scientific and religious ideas. Similar to Subbotsky, these authors suggest that certain fundamental aspects of human cognition, in the form of cognitive biases, serve to promote and support this synthesis and hybridization of explanatory systems in everyday reasoning in ways that have often been viewed as incompatible in the minds of rational beings.

The third contribution by Paul Harris also looks at the coexistence of scientific and religious beliefs, but with respect to death, rather than the origin of species. Somewhat surprisingly, given most Americans believe in the afterlife, to date most research exploring children's understanding of death has focused on children's understanding of death as a natural, biological process, ignoring religious and spiritual perspectives on death. Harris wrestles with the issue of how individuals can say that all biological processes end at death, but then be completely fine with talking about the afterlife. How can this be if science and religion are incompatible?

In his paper, Harris describes research conducted with his colleagues [Astuti & Harris, 2008; Harris & Giménez, 2005] showing that both children and adults develop two different conceptions of death, one biological and one religious. One of the surprising aspects of this research is that, in contrast to Piaget's view that magical thinking is replaced over the course of development by more logical and scientific thinking, Harris argues that forms of supernatural thinking involving conceptions of the afterlife increase, rather than decrease, with age. Another important contribution of Harris' paper is the idea that coexistence of natural and supernatural forms of thinking can be found in diverse cultures around the world, and in ones with very different religious orientations. Similar to Subbotsky, Harris and his colleagues show that the strength of one form of thinking may vary by context and situation.

The final chapter by Cristine Legare and Aku Visala steps back from a purely psychological perspective to consider how the integration of psychological and philosophical accounts of explanatory coexistence might help us move beyond the traditional distinction of science and religion as combative, contradictory, and perhaps incommensurate views of the world. The paper builds on research by Legare and colleagues [Legare, Evans, Rosengren, & Harris, in press] suggesting that natural and supernatural explanations coexist in a variety of ways. Specifically, these different forms of reasoning are sometimes used in separate domains or contexts, sometimes used in loose combination, and sometimes used in a highly integrated and systematic fashion. Ultimately, they suggest the need for an interdisciplinary approach to investigating the coexistence of natural and supernatural explanations.

Two commentaries are provided by Susan Gelman, a leading cognitive developmental researcher, and Harvey Whitehouse, a leading researcher in anthropology. In her commentary, Gelman explores the impact of considering the coexistence of natural and supernatural beliefs on our views of conceptual coherence, conceptual change, and the notion of human rationality. Throughout her commentary, she points to places where the ideas in these papers could be extended in further research to help us gain a better understanding of the coexistence of explanatory beliefs.

Whitehouse's commentary places a strong emphasis on the need to consider the function of different types of explanations and beliefs. He goes beyond Subbotsky's analysis of function to argue that researchers in this area should consider relevant research in anthropology and evolutionary psychology in attempting to understand the different functions of natural and supernatural explanations. Like Legare and Visala, he argues for the need for more interdisciplinary collaborations to explore these issues in more detail.

Indeed, it is our hope in putting this special issue together that the contributions in this volume will stimulate more research on this intriguing problem, generate exciting interdisciplinary research, and ultimately provide us with a better understanding of how the minds of children and adults function when faced with phenomena that can be and are viewed from multiple explanatory frameworks.

References

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