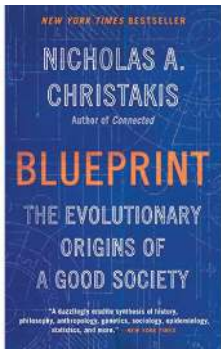


# Book reviews

David A. Bennahum, MD, and Jack Coulehan, MD, Book Review Editors



## Blueprint: The Evolutionary Origins of a Good Society

Nicholas A. Christakis, MD, PhD  
Published by Little, Brown Spark,  
First edition, March 26, 2019, 544  
pages.

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Nicholas Christakis proposes that in order to function effectively and to survive long-term most societies are good. At heart a sociobiologist, in the tradition of Edward O. Wilson, Christakis has written an elegant and most informative book that should interest anyone who works in health care.

Christakis is a physician and sociologist who directs the Human Nature Lab at Yale University where he is the Sterling Professor of Social and Natural Sciences in the Departments of Sociology, Medicine, Ecology, and Evolutionary Biology, Statistics and Data Science and Biomedical Engineering. He writes in the introduction:

Therefore, I am less interested in what is different among us than what is the same. Even though people may have varied life experiences, live in different places, and perhaps look superficially different, there are significant parts of others' experiences that we can all understand as human beings. To deny this would mean abandoning hope for empathy and understanding to the worst kind of alienation.<sup>pixix</sup>

Where does our cross-cultural similarity come from? How can people be so different from—even go to war with one another—and yet also be so similar? Christakis' answer is that our genes give us an evolutionary blueprint for making a good society.

This book is divided into 12 chapters, four of which are devoted to the society within us and the different kinds of communities that we create such as unintentional communities, intentional communities, and artificial communities. Christakis takes as examples accidental communities that emerged from shipwrecks, planned communities such as the Israeli Kibbutzim, the Shakers, and the survivors on Pitcairn Island of the Bounty mutiny.

The author suggests that humans are pre-wired to form

and live in societies. "The cultural universals that concern us here—the social suite—are focused on traits related to social organization that are shaped by natural selection and partially encoded in our genes."<sup>p125</sup> Our capacity to make societies is thus a biological feature of all humans. Christakis states that at the core of all societies is the social suite which he defines as:

1. The capacity to have and recognize individual identity;
2. Love for partners and offspring;
3. Friendship;
4. Societal networks;
5. Cooperation;
6. Preference for one's own group (that is "in-group bias");
7. Mild hierarchy (that is, relative egalitarianism); and
8. Social learning and teaching.

"These features arise from within individuals but they characterize groups. They work together to create a functional, enduring, and even morally good society."<sup>p14</sup> He writes that we do not find functional societies that lack love, friendship, cooperation, or personal identity.

The author goes on to describe the elements in various social groups, both human and animal. He warns the reader against ethnocentrism. As an example, in his chapter on love, he discusses kissing. To his surprise it has been observed in chimpanzees and bonobos; but kissing occurs in only 46 percent of 168 cultures studied. He raises the question of why humans have a drive not just for sexual relationships, but also for loving relationships, for pair-bonding, also found in some bird species. The discussion of the variety of cultural practices around love and lust is fascinating. But Christakis concludes that, "The drive to love your partner is universal."<sup>p168</sup>

Research on prairie voles has shown that a number of neurotransmitters such as oxytocin and vasopressin regulate pair bonding. It is also now understood that maternal, and to some extent paternal, bonding to a newborn is also regulated by oxytocin. Thus, the importance of giving the new mother and father a chance to hold the newborn as close to birth as possible.

From a survival perspective bonding and monogamy is also associated with enhanced parental care. In mice, 12 genomic regions that include genes for the expression of vasopressin have been identified that involve parental care.<sup>p187</sup>

In the chapter on animal friends, Christakis explores a variety of animal networks such as those of dolphins, whales, elephants and primates. These are all species that support each other and express what appears to be a form of empathy. “Humans may also owe their longevity to the requirements of social learning. The ability to care for younger kin and to transmit knowledge to them and to others in the group make those who are no longer reproducing still useful.”<sup>p226</sup> Christakis concluded this chapter with:

Most human virtues, I would argue are social virtues. To the extent that we care about love, justice, or kindness, we care about how people enact these virtues with respect to other people. No one is interested in whether you love yourself, whether you are just to yourself, or whether you are kind to yourself. People care about whether you show these qualities to others. And so friendship lays the foundation for morality.<sup>p239</sup>

In support of his argument he quotes Ralph Waldo Emerson, “A friend may well be reckoned a masterpiece of Nature.”<sup>p278</sup>

In the closing chapters of the book, Christakis examines genes and culture, and natural and social law from the perspective of sociobiology. “The cultural environments that humans construct for themselves and have been constructing for millennia have become a force of natural selection, modifying our genetic heritage.”<sup>p365</sup> He states, “Our species survival across the world hinges on its capacity for culture, a capacity that is ingrained and that has led to astonishing inventions like kayaks and parkas...no other species depends so much on creating and preserving cultural conditions.”<sup>p365</sup> “This interaction between genes and culture is

known as the theory of gene-culture co-evolution.”<sup>p366</sup>

In the final chapter Christakis asks, “Why is there such resistance to the integration of biology and human behavior?”<sup>p399</sup> He argues that a distaste for 19th century positivism as evinced by Auguste Comte and Emile Durkheim prompts a rejection of scientific explanations for social phenomena. He states that as far back as Plato the distinction between poetry and philosophy presages the modern chasm between the humanities and the sciences. He argues that the reductionism of science can help understand biological and social phenomenon. But, the whole can emerge as greater than the parts, i.e., consciousness is much more than the neurons and connections of the cells.

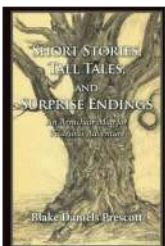
Christakis concludes with a discussion of the natural and the good. He asks, what is the fundamental origin of moral values? Why do humans have such values? Is their origin human or divine?

He argues that humans are fundamentally good and therefore have made societies because we have evolved to be “primed for conflict and hatred (of the other), but also for love, friendship, and cooperation. If anything, modern societies are just a patina of civilization on top of the evolutionary blueprint.”<sup>p418</sup>

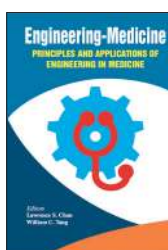
This is a most stimulating book that is elegantly written, rich in ideas, and very much worth the time of anyone interested in health, science, and society.

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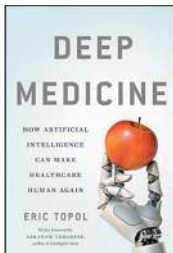


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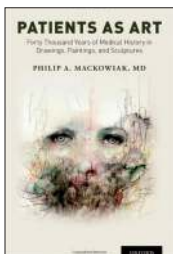
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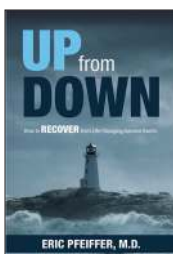
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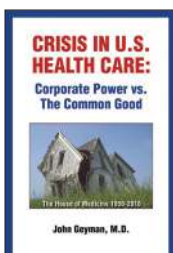
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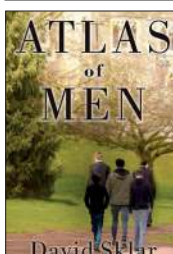
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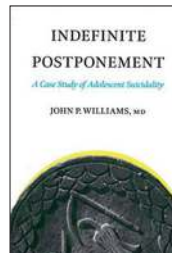
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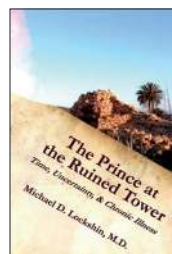
*Atlas of Men*, by David Sklar, MD (AΩA, University of New Mexico School of Medicine, 2009, Faculty); Volcano Cannon Press; October 16, 2018; 310 pages.



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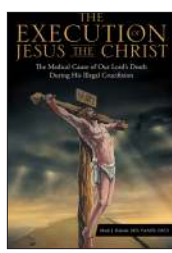
*When You Can't Do Any More*, by Barry L. Zaret, MD (AΩA, New York University School of Medicine, 1965); self-published; September 11, 2017; 84 pages.



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*Mary Jane Safford, MD: Indomitable Mite*, by Elizabeth Coachman, MD (AΩA, Lewis Katz School of Medicine at Temple University, 1976); self-published; February 11, 2017; 428 pages.



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