Social animals

Blueprint: The evolutionary origins of a good society
Nicholas A. Christakis
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Daniel Davidson

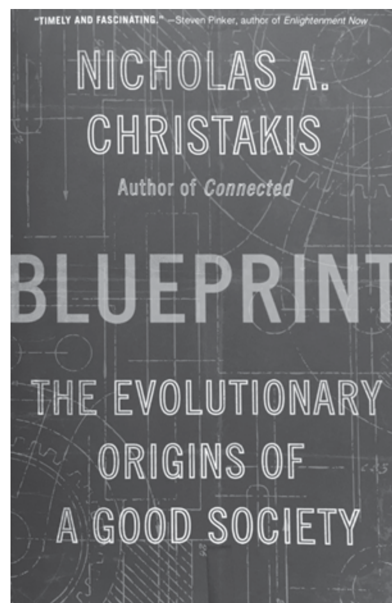
People have an instinctive sense of how to be cooperative, make friends, find love, and learn new things. Shocking? For the average person on the street, probably not. Sure, there's lots of negativity in every culture. There's plenty that one readily recognizes as the opposite of social—what one might even dare to describe as bad, evil. But that's another conversation. Most people will agree with the simple point that people seem to come equipped with at least some basic capabilities, and sometimes even good instincts, for how to get along in a social world. After all, we are social creatures. We sense these instincts within ourselves.

In some circles, though, the hard-wired instinct for social interaction is surprising. Strong critiques of the idea that there is any fixed, universal human nature have been under attack in many academic circles, particularly in the humanities and certain social sciences. In these circles, human social arrangements are more commonly described as constructed, not innate. The concept of a fixed human nature is dismissed as a relic of old fashioned (and, doubtless, misguided) philosophical or (maybe) religious commitments.

Into this fray comes Nicholas Christakis, a professor at Yale with training in medicine and sociology. He runs Yale's Human Nature Lab, a hub for cutting-edge research at the intersection of the social sciences and biology. Drawing on his research there and his broad reading in related fields, Christakis offers *Blueprint* as his grand argument that humans do have an innate human nature and that this human nature predisposes humans for their social activities. Humans possess a 'social suite,' Christakis writes, a set of abilities and inclinations that together make sociability—and with it, society itself—possible. And according to Christakis, this social suite is best understood as rooted in genetics and as an evolutionary adaptation.

Creationists approaching the book can find lots of things to criticize and critique. Christakis's approach to human nature seems to be fundamentally shaped by evolution. And at times Christakis veers toward reductionism, in the sense that he sometimes reduces mental and emotional aspects of humanness to purely biological phenomena. And Christakis assumes that humans are a form of animal; this allows him to draw freely from studies of animal sociability when trying to understand human sociability.

But the book's evolutionary philosophy is, in other regards, less pervasive than I initially expected it might be. Christakis generally stops short of really proffering arguments for evolution as the origin of sociability. He doesn't spend much time explaining how the human mind (or animal minds, for that matter) came about from non-mind. Nor does he explain how one kind of animal's mind might evolve into another. If one can look past the trappings of evolutionary thought in the book's rhetoric, there is much here that the discerning Christian reader can find valuable in understanding God's remarkable creation. A substantial component of the book comprises fascinating descriptions of research on human sociability. And because Christakis is a good observational



social scientist, these descriptions can be disentangled from the evolutionary assumptions.

The social suite

Christakis starts the book by describing a set of characteristics that together he terms the 'social suite'. These are (p. 13):

1. the capacity to have and recognize individual identity
2. love for partners and offspring
3. friendship
4. social networks
5. cooperation
6. preference for one's own group (that is, 'in-group bias')
7. mild hierarchy (that is, relative egalitarianism)
8. social learning and teaching.

Most of these are appealing. As Christians, we can see most of these as part of God's design for humans. We were made with individuality, as unique creations of God with personality (Psalm 139). We were designed not to be alone but to love God and others: "Then the Lord God said, 'It is not good that the man should be alone; I will make him a helper fit for him'" (Genesis 2:18, ESV). A proclivity to love one's partner (spouse) was part of the

original creation order. Care for one's children, too, is basic to God's design for the human condition (Isaiah 49:15; Matthew 7:9–11). God also commends friendship and the wise development of what we might call social networks (Proverbs 27:9; Proverbs 13:20). He designed people with the capacity to work together (Adam and Eve were jointly given the command to tend the garden and care for creation, Genesis 1:28) and with the ability to teach and learn from each other (Proverbs 1:5).

Christakis's sixth characteristic, in-group bias, is more ambiguous. Scripture certainly recognizes that people are expected to prioritize. Parents are expected to provide for their children first of all before calling on other support structures (1 Timothy 5:8). And "Greater love has no one than this, that someone lay down his life for his *friends*" (John 15:13). The extraordinary character of God's love is evident in that He loved us while we were still His enemies (Romans 5:7–8). Does this imply that selfless love of others, without in-group bias, is God's ideal?

Does this suggest that in-group bias is a product of the Fall? Or is a preference for one's close relatives a natural component of the created order and the expression of selfless love without in-group bias a special gift above and beyond the normal created order? However one works out the details of a Christian theological anthropology of friendship, it's sufficient for present purposes to note that Scripture recognizes the existence of a general preference for one's own group. It indeed assumes some form of this as a starting point for Scripture's own analysis of personal obligations.

Mild hierarchy is also ambiguous as to whether one can assume this as part of the created order or a product of the Fall. After the Fall, Scripture is clear that there have been put in place authority structures that we might term hierarchical. Scripture admonishes individuals to respect authorities in family, church, employment, and state. Within the big tent of Christian orthodoxy, various Christian traditions differ in exactly how to interpret hierarchical relationships (different understandings of family authority, of ecclesiology, and of the relationship of the individual to civil governments). But that there's some biblical principle of authority is beyond argument and is universally accepted by orthodox Christian traditions. So here, too, some amount of hierarchy is part of the Christian understanding. The emphasis is a bit different from Christakis's—he focuses on the relative status of individuals based on their perceived prestige and value in a social network. But there is, in any case, a point of contact between Christakis's observations and the biblical presentation of God's design for human society.

Creationists can accept and indeed celebrate the characteristics of what Christakis terms the 'social suite' as part of God's very good design for humans. Christakis helps us to recognize how pervasive these are and how essential to human society.

Methods

Much of the book is devoted to arguing that the social suite is universal to the human experience, contrary to the radical constructivists, who would hold that human nature is endlessly malleable. When claiming that a trait is universal, Christakis doesn't mean that there aren't exceptions to every trait, in the sense that not everyone exhibits this trait. The point is instead that inherent in being human is a capacity for love, friendship, and cooperation, even if individuals aren't always loving, friendly, or cooperative.

At the beginning of the book, Christakis devotes several chapters to engaging descriptions of the methods he relies upon. His aim here is to explain how one can study the fundamentals of human society in a rigorous manner. One chapter is devoted to natural experiments from history. Communities stranded due to shipwreck, for instance, provide fascinating data about the conditions that allow for the survival of a small society in survival conditions (figure 1). They illustrate again and again that those communities that are

Figure 1. Mutineers on the HMS Bounty cast the ship's captain adrift before taking the Bounty on a long voyage, ultimately arriving at remote Pitcairn Island. Isolated communities, often created by shipwreck, provide real-world tests of what is required for successful societies, as Nicholas Christakis explains.

cooperative and friendly succeed. On the other hand, when shipwrecked individuals behave in competitive ways, try to freeload on others, and generally lack trust, compassion, and cohesion, they tend to fare poorly in survival conditions. Another chapter introduces various ways of utilizing 'artificial communities' as test subjects. These can be more traditional groups of experiment subjects, as has long been done in psychological research. This can also include players of massive online games and participants in larger online study groups. These more artificial settings allow researchers to control for variables and be sure of causation as they observe various social interactions and phenomena. Here, too, "people behave in very human ways, creating types of social order that comport with the rules of the social suite" (p. 109).

A friendly world

Subsequent chapters turn to examine the various components of the social suite. On friendship, for instance, Christakis starts with a rich description of the sociology and anthropology of friendship. He describes interesting research mapping friendship networks in various cultures, efforts to enumerate characteristics of friendships in multiple cultures, and more. It turns out that feelings of friendship are more common than animosity and that friends were more likely to reciprocate friendship than enemies were to reciprocate animosity (p. 262). Christakis takes this as encouraging evidence that evolution turned out a more or less social and good product. He also sees this as part of a larger case he is interested in building that evolution fosters good rather than primarily fostering a ruthless world of individualistic survival of the fittest.

For the Christian, the evidence that there is a great deal of positive social capability and practice in the world has to be processed, not as the product of evolution, but as the product, first of all, of God's good design. The Christian also recognizes that humans have fallen into sin, explaining the pervasiveness of evil. And yet the Christian also recognizes that God still gives good gifts to man and prevents humankind from falling into the total chaos that sin would logically lead to. (Some Reformed Protestant writers would term this God's 'common grace'.)

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Figure 2. A traditional Hadza hut in Tanzania. Evolutionary anthropologists consider the Hadza people's foraging lifestyle to be fairly representative of pre-agricultural human societies.

Love, marriage, and the biblical pattern

In his chapter on love and commitment between partners, Christakis surveys anthropological research on the diversity of marriage practices around the world. The Hadza people of Tanzania live as foragers, a mode of life thought by evolutionary anthropologists to be one of the closest approximations available for how people lived in pre-agricultural times (prior to about ten thousand years ago, according to evolutionary timescales) (figure 2). As it turns out, Christakis writes, the Hadza approach to love and marriage is "recognizable to modern American eyes" (p. 140). They are generally monogamous (occasional exceptions were initiated by men but usually resulted in the first wife leaving). Young people choose their own partners after a brief courtship, usually around age seventeen or eighteen for women and two to four years older for men. The characteristics that young Hadza men and women value in a partner include character, looks, intelligence, and foraging ability. Sexual infidelity was the "leading reason given for divorce among the Hadza" (p. 143).

There are of course variations on themes when it comes to love, marriage, and commitment across cultures. Christakis considers examples of polygyny (more than one woman per man) and (rarer) polyandry (more than one man per woman). Christakis repeats the standard economic and environmental explanations: polygyny is common in the labor-intensive herder community of Turkana in western Kenya, where having the maximum number of children is valued to help with keeping the livestock. Polyandry is more common "in ecological situations where sustaining a household requires more than one

man—for example, when one man must travel long distances to support the family and another is needed to guard the home" (p. 153). Christians reading this book can recognize that marriage relationships are shaped by much more than just utilitarian economic analysis. And yet they can also recognize that environment and economics help us to understand the development of human institutions and the ways that (in a fallen world) they deviate from God's original design.

An extreme outlier case where sex comes without marriage commitment or anything that resembles it is that of the Na, a farming group in the mountains near Tibet. But in the end, this exception reinforces the prevalence of the rule. In a matrilineal society, the norm is that there is very little lasting partnering between men and women at all; instead, there are short 'visits' from a man to a woman without long-term commitment. Christakis notes that this is exceptional. He suggests that every human experiences 'fundamental' desires that are irreconcilable: "to possess one's partner and to have multiple partners" (p. 163). Across human society and 'evolutionary time', he says, "attachment has proven the stronger force" and has been institutionally adopted. The Na are unusual in opting to institutionalize the multiple-partner arrangement. And yet, Christakis notes, the choice is not easy: "An elaborate cultural edifice is required to suppress our deep, ancient desire to possess our partners and feel attachment and love for them" (p. 164).

For Christians reading this book, there is much here to appreciate. If one can look past the casual evolutionary rhetoric, there is actually a great deal of good sociological and anthropological material here that reinforces the biblical position. Marriage and commitment are part of God's design because it works. We live in a fallen world in which people deviate from God's pattern. But it takes work to suppress the truth (Romans 1:18).

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Throughout the book, Christakis regularly references research on animal sociability. From an evolutionary perspective, there's no reason to think that humans are different in kind from animals. So it is natural for Christakis to draw analogies between the social networks formed by humans and by elephants, or to reflect on the friendships formed by chimpanzees as roughly similar to patterns among people. Biblical creationists ought to be more wary than Christakis, aware of the crucial distinctions between humans and other animals. But once this is kept in mind, there's nothing wrong with looking for the similarities across the animal kingdom and with the capabilities for sociability built into many animals to differing degrees. The fascinating research on animal sociability doesn't mean that humans and elephants are closely related, even in an evolutionary theory. For a creationist, the similarities, where they exist, can be acknowledged and studied as a way of appreciating the extraordinary handiwork of the Creator, and of better understanding where the same design features and capacities show up in different places of the creation.

Biological reductionism

In parts of the book, Christakis offers biological explanations for social phenomena. This isn't always a problem and is sometimes unarguable. Domestication of various animals demonstrates that some species' sociability is deeply connected to their biology. (Scientists are still working hard to understand the incredibly complicated interplay between the various genes associated with domestication.[1]) Similarly, it is not necessary to be an evolutionist to find it unsurprising that there are strong correlations between genetic similarity and friendship. Sometimes this is a matter of having a similar ethnic background (Greeks choosing other Greeks as their friends) or because similar genetics lead to similar propensities—athletic people befriend athletic people (pp. 255–257). But sometimes this is where Christakis veers into his most direct evolutionary story-telling, arguing, for instance, that humans self-domesticated over a relatively long amount of time. This, however, isn't necessary from a creationist perspective—God *designed* people to be social. So the creationist doesn't need to explain how violent hominoid animals became more domestic.

At other times, Christakis dabbles with evolutionary accounts of human behavior that he acknowledges may too easily "become … just-so stories" (p. 190). In explaining pair bonding, for instance, Christakis discusses several highly speculative theories. These include that hormones that help women bond with their children evolved to incidentally benefit partners as well, or that men evolved to be territorial and that these same neural pathways were then applied to mates, such that they, too, were subconsciously thought of as a kind of territory. (Christakis hedges this latter theory about with qualifications to make clear that neither he nor the evolutionary psychologist who first proposed the theory believe that women are possessions.) That there are biological phenomena (hormones, physical similarities, and more) that affect human relationships is not a problem from a creationist perspective. But the evolutionary explanations for their origin are hardly compelling parts of the analysis. And, more generally, creationists should be wary of efforts to invoke biology to explain the maximum amount of human behavior. The human mind is much more than biology. One of the fundamental problems in evolutionary psychology is its tendency to treat the mind as a purely physical entity that can be controlled and explained by genetics (and evolution).[2] Christakis's

book is at its least compelling when he pursues these lines of inquiry.

Conclusion

Christakis fills the book with references to evolution. Evolution, he says, is the source of the relevant human skills, instincts, and abilities that make possible the 'social suite'. Yet the book does not develop strong arguments for this evolutionary development. More often, evolution is the hero of a just-so story that supplements the actually fascinating social scientific and biological research that Christakis writes about. For the careful creationist reader who can look past the evolutionary trappings, there is actually much in this book that should inspire appreciation—and further research—on the remarkable set of capabilities that God gave to enable humans to form societies and live lives as social beings.

References

1. Wright, D., The genetic architecture of domestication in animals, *Bioinformatics and Biology Insights* **9**(Suppl 4):11–20, 2015.
2. See Joubert, C., Evolutionary psychology: why it fails as a science and is dangerous, ARJ **5**:231–246, 2012.