

Turchin, Peter. 2016. *Ultrasociety: How 10,000 Years of War Made Humans the Greatest Cooperators on Earth*.

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In this ambitious, learned, and valuable book, biologist-turned-historian Peter Turchin addresses three big topics, which he defines as “the evolution of cooperation, the destructive and creative faces of war, and the strange trajectory of human egalitarianism” (230). His main goal is to explain the undeniable fact that humans are ultrasocial. Following the biologist Edward O. Wilson, he calls this the ability to “cooperate in large groups of genetically unrelated individuals” (14), and argues that “it was violence—societies making war on each other—that drove the evolution of ultrasociality, and it was ultrasociality that ultimately made violence decline” (219).

As students of cultural evolution will be well aware, both this question and this answer have been around for a while. Scholars from many disciplines have been analyzing ultrasociality in the 40 years since Wilson’s pioneering work (my own favorite treatment is the economist Paul Seabright’s book *The Company of Strangers*), and the same is true of the idea that violence drove the rise of large human groups that then imposed ultrasociality on their members. This was a central theme in the political scientist Azar Gat’s monumental 2006 work, *War in Human Civilization*, and, in a sense, goes all the way back to Thomas Hobbes’ *Leviathan*, published in 1651.

But although these furrows are both well plowed, three other features of Turchin’s book make it a very valuable contribution to evolutionary thought. The first is the author’s

unwavering commitment to transforming history into an evolutionary science. “If you want to understand something, first learn how to measure it,” Turchin insists (5). He argues that mathematics is the only language precise enough “to make sense of the complex interplay of forces affecting the evolution of cooperation. If we don’t hold ourselves up to the tests of mathematical rigor, it’s simply too easy to make logical mistakes and to be led astray by faulty arguments” (82–83).

To be sure, those of us trained in the methods of mainstream history might balk when Turchin pronounces that historians “are not in the business of testing [explanations] with data,” or that although “there is nothing wrong with such intellectual games . . . they are not science” (19, 18). Qualitative research has a rigor of its own, and the last quarter millennium of modern historical scholarship has made major contributions to humanity’s stock of knowledge. But even so, Turchin is surely correct that a quantitative, regularity-seeking approach—what he calls “cliodynamics”—has the potential to take us beyond the old particularistic approaches.

Ultrasociety is aimed as much at nonprofessional readers as at academics, and Turchin consequently goes to great efforts to keep it almost math-free (as he observes, the book contains only one equation, and even that is explained in very clear prose and diagrams [82–90]). However, Turchin has developed the

mathematical basis of his arguments in detail in several other books and his own journal, *Cliodynamics*.

After thirty years in the history profession, I am not optimistic that many of my colleagues will reinvent themselves as quantitative scientists anytime soon. However, Turchin's cliodynamic crusade is anything but a fool's errand. As his own career shows, there is nothing to stop natural scientists from mastering historical data and applying more rigorous methods to them, with valuable results.

Ultrasociety's second contribution is its explicit and lucid promotion of multilevel selection as the appropriate evolutionary model for explaining history (especially at 81–94). By this, Turchin means that natural selection operates on cultural traits and on genetic ones, and that cultural and genetic evolution will not necessarily favor the same outcomes. The most important example of this clash between levels and units of selection is perhaps bravery: young men who are predisposed to put themselves in harm's way are less likely to pass their genetic traits on to the next generation than those who are predisposed to skulk in their tents, but a social group that encourages its young men to fight bravely against enemies—even at the cost of their own lives—is more likely to pass its cultural traits on than a group that is unable to motivate its men to stand and fight. And this, Turchin argues, largely explains the cultural evolution of ultrasociality: the more successful a group is at cooperating internally, the more successful it is likely to be in competing against its rivals.

Multilevel selection pits Turchin not only against humanists, who see no need for evolutionary theory in the study of the past, but also against prominent natural scientists, such as George Williams, Richard Dawkins, and Steven Pinker, who defend “gene-centric” theories of culture (62). This is the part of Turchin's case where his unique skill set is most important: unlike most humanists, he really understands evolutionary theory, and unlike most evolutionists, he has a professional-level grasp of the

details of world history. In *Ultrasociety* and his other recent books, Turchin makes a compelling case that multilevel selection is indeed the best theory for explaining the grand sweep of history.

The book's third great contribution builds on the first two. The only way to test his claims about multilevel selection, Turchin suggests, is by compiling a systematic database of historical knowledge, pulling together and organizing in a consistent way the vast amounts of knowledge currently distributed among thousands of individual historians, archaeologists, and anthropologists (231–33). Undeterred by the logistical difficulties, Turchin has applied himself to just this task. An early version of the product, a global history databank named Seshat (after the ancient Egyptian deity of scribes) is now available online (<http://seshatdatabank.info/>). The mixed results of a century or so of anthropological efforts at coding cultural traits into quantitative indices suggest that no single format will ever be adequate to answering all our questions about the past. But Seshat—the most comprehensive, rigorous, and ambitious attempt to date—promises to be one of the great achievements of early twenty-first-century comparative social science.

Ultrasociety, then, is a very welcome book, and almost all historians, evolutionists, and students of the past will learn a great deal from reading it. It is also an enjoyable read, written in an engaging and remarkably jargon-free style and full of examples and explanations that are entertaining and instructive. There are, of course, things to quibble about: on the presentation side, the first 60 or so pages have many typos, the footnoting is uneven, and there is no index. The treatment of other scholars' work is sometimes a little high-handed, and there are some surprising omissions from the bibliography, such as Keith Otterbein's *How War Began* (2004), which anticipated Turchin's suggestion that rates of violent death spiked with the rise of the first states and then declined (169–71). There are also points where Turchin seems to want to have his cake and

eat it. After telling us that “war . . . first created despotic, archaic states and then destroyed them, replacing them with better, more equal societies,” he then insists that “when I call war ‘creative’ or ‘productive,’ my intent is not to glorify it nor to argue that war is in any sense good” (22, 116). If the argument is that war created better societies that went on to make the world less warlike, it cannot also be that war is good for absolutely nothing.

Finally, and inevitably, area experts will find many areas of disagreement in a book of this scope. Those of us who deal in grand theories of history constantly have to fight the temptation to try to shoehorn too much into our narratives, and Turchin—like everyone else—sometimes succumbs. One of the big breakthroughs in global history in the last few years has been the recognition that the Eurasian steppes had a huge impact on the development of the band of civilizations stretching from the Mediterranean Sea to China, but it seems to me that Turchin sometimes takes this insight a claim too far. The quantum leap in the size and complexity of empires during the first millennium BC was not a response to the rise of horse-riding nomads on the steppes, as Turchin claims (199–202). The first time we hear of steppe horsemen seriously impacting the agrarian world is in the later seventh century BC, when they contributed to the fall, not the rise, of the Assyrian empire. By the time nomads became entangled in major ways with China, around 200 BC, its internal process of consolidation into a single empire had already been under

way for three or four centuries—and, so far as we can tell, steppe raiders had no direct and almost no indirect influence on the creation of Indian and Mediterranean mega-empires. Turchin singles out the rise of the hoplite phalanx, the heavy infantry formation that characterized classical Greek armies, for special attention, but this is particularly difficult to connect to steppe horsemen (200–201). The phalanx was astonishingly vulnerable to fast-moving riders striking at its flanks and rear, and it only dominated eastern Mediterranean battlefields between 600 and 350 BC because cavalries were so rare in this region. The Persian army only shifted slowly from a primarily infantry to a primarily cavalry force across the fifth and fourth centuries BC, and once Philip of Macedon had developed the first really effective combined-arms tactics in the 350s BC, no traditional Greek phalanx could withstand him.

Turchin would probably respond that these are all quibbles, and he would be quite right. Just as natural historians can argue passionately over the details of particular plants and animals without undermining biological evolution’s general explanatory power, conventional historians can go on arguing passionately over the details of particular societies without undermining cultural evolution’s power as a general explanation of ultrasociety. Turchin’s book is an excellent manifesto for multilevel selection and will be read with profit by everyone interested in answering the big questions about our past.

