

WAR AND PEACE AND WAR: The Life Cycles of Imperial Nations by Peter Turchin 0-13-149996-3

War & Peace & War by Peter Turchin  
01 October 2005  
From New Scientist Print Edition  
Mark Buchanan

"WRITING history," Gustave Flaubert once remarked, "is like drinking an ocean and pissing a cupful." Historians don't just list everything that has ever happened, but try to string together selected events that hopefully give some insight into the process of history. History is, or should be, about learning from the past to understand the future.

Are there "laws of history", patterns or regularities that would let us make predictions? Karl Marx thought he saw a steady progression in history, leading inevitably to a future of world government by the workers. British historian Arnold Toynbee saw cyclic patterns in the rise and fall of civilisations. But most historians today think that Marx and Toynbee were deluded, and that the pursuit of historical laws is, in general, a fool's errand.

Refreshingly, Peter Turchin doesn't agree. A professor of ecology and evolutionary biology at the University of Connecticut in Storrs, Turchin argues in *War & Peace & War* that history isn't just "one damned thing after another", but presents discernible patterns. In the patterns he identifies, he may ultimately be wrong; time will tell. What is most exciting is that Turchin brings modern discoveries in psychology, experimental economics, evolutionary biology and even physics to bear on history. This isn't just another arbitrary narrative.

Aside from our intelligence, what really sets humans apart from other species is our ability to cooperate, even with genetically unrelated strangers. Noting this fact, Turchin takes cooperation as his central focus, and to make the project specific, he tries to tackle the growth and dissolution of empires.

Empires rise and fall, he suggests, because of "competition and conflict between groups, some of which dominate others". On the world stage, ethnic groups - identified by race, language and other markers - compete with one another for resources, land and so on. Plausibly enough, those able to muster and sustain a higher level of internal cooperation should tend to prevail, doing a better job of providing a collective defence or in coordinating attacks against others.

In this sense, Turchin sees history as an evolutionary competition between more or less cooperative groups, and this raises two natural questions. First, how do new highly cooperative groups emerge, and so become candidates for expansion and the founding of new empires? Second, what happens to these cooperative groups that eventually undermines their success?

A fundamental idea of biology is that new adaptive traits emerge most readily where evolutionary pressure selects for them. Birds evolve longer beaks only under conditions in which longer beaks make a real difference to a bird's fitness. Following this idea, Turchin argues that particular geographical zones should act as incubators for highly cooperative groups, because they impose conditions under which cooperation really matters.

In particular, he suggests, peoples that live at the boundaries of existing empires face serious threats as those empires attempt to expand. On the other hand, such peoples may also have opportunities for beneficial trade with the empire. "In the pressure cooker" of such a zone,

Turchin suggests, "poorly integrated groups crumble or disappear whereas groups based on strong cooperation thrive and expand".

"It is the very success of an empire that sets up the conditions for its demise"

So, the idea goes, the frontiers of existing empires offer fertile territory for seeding highly cooperative groups that might then grow into new empires. Turchin argues that a number of historical examples fit this pattern. Russia rose up out of a three-century battle to survive in the face of murderous raids by Tatar bands from the steppe to the south. America grew strong and cohesive during a similarly murderous three-century battle to survive and expand against indigenous people.

Curiously, this part of Turchin's argument finds support in modern experimental economics and anthropology. Experiments over the past decade or so have established that most individuals aren't the greedy, rational machines of neo-classical economics, but are often willing to cooperate with others even when they clearly have nothing to gain by doing so. Some of the most convincing efforts to explain such "irrational" tendencies point to a process of cultural group selection that looks surprisingly like Turchin's historical dynamics - competition between groups of greater or lesser cooperative skills, with the more cooperative tending to win out.

But if high levels of internal cooperation lead to the rise of great empires, what leads to their ultimate demise? Here Turchin suggests that another natural process comes into play. As an empire grows rich, inequalities in wealth and power naturally emerge among its people. Consequently, the very success of an empire sets up the conditions for its demise, through the "corrosive effect that glaring inequality has on the willingness of people to cooperate".

Turchin also illustrates this point with several historical examples, including the abrupt decay of France in the 14th century, following glory in the 13th, and the fall of Rome. It would be interesting to know what he makes of today's America, and the fallout after the disaster and debacle of New Orleans. But Turchin goes beyond mere examples.

He also argues - rightly, I think - that the emergence of such inequality ultimately has less to do with people than with simple mathematics. A key discovery of so-called "complexity science", and the physics of systems that are out of equilibrium, is that growth often leads to a "rich get richer" phenomenon, which naturally generates dramatic differences between distinct parts of a system. This is true in systems ranging from the web - where a small fraction of sites account for a large fraction of all hypertext links - to crystals growing in solution. In the context of economics, rich-get-richer phenomena have been shown to cause a few business firms to become far larger than all the others, and a few people to become incredibly wealthy. Inequalities emerge inexorably, and for fundamental reasons.

None of this is to say that Turchin is right about what causes the rise and fall of empires. He expresses a convincing argument clearly and with a wealth of supporting historical material, but no one, as yet, can possibly know if this explanation is right. Even so, his infusion of science into an area that too often ignores it is surely admirable.

It will be interesting, however, to see what professional historians make of Turchin's views. Today the task for many historians isn't so much to seek the rhythms of history as to recreate the thoughts and motivations of the people who lived it. This idea can be traced to the British historian Robin George Collingwood, who insisted that all history is "the history of thought". In this view, historians aren't actually interested in what Turchin calls "historical dynamics" -

finding the causes of wars or of great empires - but in discovering what the people involved were thinking, and how their thoughts led to what happened.

To me, and certainly to Turchin, this view seems like an unfortunate retreat from the task of understanding the past and its dynamics so that we might understand the future better. It's likely that there aren't any obvious trends or simple cycles in history, nothing that can be wrapped up in a few equations à la Isaac Newton. But by bringing modern science to bear, researchers - if not historians - may yet find meaningful patterns in history.

Mark Buchanan's latest book is *Small World*, Weidenfeld & Nicolson, 2003  
From issue 2519 of *New Scientist* magazine, 01 October 2005, page 44