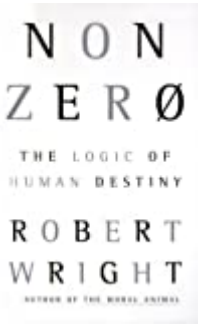
H-Net Reviews
in the Humanities & Social Sciences



Robert Wright. *Nonzero: The Logic of Human Destiny.* New York: Pantheon Books, 2000. x + 435 pp. $27.50 (cloth), ISBN 978-0-679-44252-3.

Reviewed by J. Bradford De Long (Department of Economics, University of California-Berkeley)

Published on EH.Net (July, 2000)

Back in 1794 the Enlightenment philosophe Marie Jean Antoine Nicolas Caritat, Marquis de Condorcet wrote his *Sketch for a Historical Picture of the Progress of the Human Mind* – the boldest of the eighteenth-century declarations that humanity had and was destined to see Progress with a capital P. Condorcet was a powerful and convincing advocate– Malthus wrote his *Essay on Population* explicitly against Condorcet. But that was the high water mark of belief in Progress. By and large the past two centuries have seen the reaction, and confidence in human Progress – technological, political, humanistic, and moral – fell out of intellectual favor.

Now comes Robert Wright, previously author of *Three Scientists and Their Gods* and *The Moral Animal*, with an excellent book accompanied by an enthusiastic blurb by William McNeill. Wright's purpose is to set out the gospel of progress anew, this time using the language of game theory as his principal mode of rhetoric. At its most basic level Wright's point is that interactions are positive-sum: there are gains from cooperation. Thus human cultural evolution has an arrow and a direction: toward greater complexity, toward higher civilization.

The direction arises at two levels. First, individual humans seek out things that increase their own powers and capabilities. Cooperation tends to do this, so people find ways to cooperate. But the most important form of cooperation is one that is almost impossible to stop: the simple sharing of knowledge. Two heads are better than one. The denser the population (and the better the means of communication) the more ideas will be generated, the larger the number of ideas that turn out to be useful, and the faster will be progress. People are, Wright argues – in my view correctly –naturally acquisitive in that they want useful things, and will eagerly copy new technologies they hear about. Thus Wright sees inventions such as agriculture as inevitable – not as a lucky accident.

Second, at the level of human societies, the societies that are more powerful – have better technologies, more effective social arrangements, greater population densities, and so forth – either swamp their neighbors or force their neighbors to copy them in order to maintain their autonomy. In Eurasia, where contact was constant from an early age – as Wright points out, in 200 on one could travel from Gibraltar to the Yangtze River and cross only three borders (p. 117) – a good innovation at one end would diffuse all the way to the other in a matter of centuries. He believes that the wide spread of religion in agricultural civilizations proves that its productivity-boosting and division of labor-enhancing effects outweigh its exploitative side (p. 86): those societies that did not have temples and priests did not flourish.

Wright dismisses gloomy talk of barbarian invasions

and the fall of empires by asserting that one goes from furs-and-swords to linen-and-pens in three generations: "The Romans weren't exactly hailed by the Greeks as cultural equals when they happened on the scene…. Yet they were massively infiltrated by classical Greek memes, which they then spread across the wider world. In Horace's phrase, 'The Greeks, captive, took the victors captive'. And, anyway, who were the Greeks to look down on intrusive barbarians? … The early Greeks had a title of honor, ptoliporthos, that meant 'sacker of cities'…. But whether these 'barbarians' sack cities, or hover on the periphery and trade … or ally with them in war or ally against them, one outcome is nearly certain: win, lose, or draw, the 'barbarians' become vehicles for advanced memes…" (p. 131). For what truly matters are the basic technologies of agriculture and craft, not the products of high civilizations. And even when you do have significant regression – in the post-Mycenean Dark Age, in the post-Roman Dark Age, or in the wake of the Mongols - Wright reminds us that "the world makes backup copies."

Wright also dismisses gloomy talk of the stagnation of Ming and Qing China, the fall of the Mughal Empire, and the technological and organizational stasis of the Ottoman Empire by arguing that the key unit is not Europe vs. Asia but is instead Eurasia. Sooner or later, Wright argues, some part of Eurasia – it did not have to be Europe - would have hit upon a superior social and technological recipe to that of the mid second millennium empires, and when it did the rest would have copied it. Wright is of the school that holds that China almost broke through to modernity, writing of how paper and woodblock printing were used to distribute useful texts –*Pictures and Poems on Husbandry and Weaving*, *Mathematics for Daily Use*, and the *Treatise on Citrus Fruit* (p. 159). The recipe that ultimately proved successful – what Wright calls the economic logic of freedom – was stopped in many places: "indeed, on balance, in the centuries after the printing press was invented, European governments grew more despotic" (p. 185). But it only had to succeed once. And given sufficient cultural variation, sooner or later a breakthrough was inevitable.

But even if you buy all of Wright's argument that forms of increasing returns – non-zero-sum-ness, as Wright calls it –impart an arrow of increasing complexity and division of labor to human social, cultural, and economic evolution, this does not necessarily amount to Progress – at least not to anything we would see as progress in human morality or human happiness. For why should organizational complexity be Progress? As Wright puts it: "… it would be hard to argue that there was net moral gain between the hunter-gatherer and ancient-state phases of cultural evolution. The Egyptians had slaves – which virtually no known hunter-gatherer societies had – and their soldiers returned from wars of conquest proudly brandishing the severed penises of their slain foes" (p. 206).

So in the end Wright is forced to play a game of three-card monte to reach conclusions that support his belief in Progress. The card labeled "complexity" must be switched for the card labeled "Progress" without our noticing. In the industrial core, at the end of the twentieth century, we are inclined to tolerate this switch –to say that it is obvious that a highly complicated and productive civilization will have widely-distributed individual wealth, lots of individual freedom, and soft forms of rule, and that social complexity is civilization. But back in the middle of the twentieth century this switch could not have been accomplished at all: "complexity yes," people would have said, "but progress no." And who knows how things will look in a hundred more years?

Marie Jean Antoine Nicolas Caritat, Marquis de Condorcet (1743-1794), was an aristocrat, a mathematician, an official of the Academy of Sciences, and was a friend of Voltaire (1694-1778). He strongly supported the revolution of 1789 as an example of human progress. But the Committee of Public Safety turned on him: he was arrested, and died in prison before he could be executed.

————————————————————

*The above review covers only the first two-thirds of the book. At that point Wright asks the question: "Aren't organic evolution and human history sufficiently different to demand separate treatment?"

I think the answer to this question is "yes," and that the book should stop at that point. Wright thinks that the answer is "no," and so the book continues. He goes on to draw analogies between human cultural evolution toward greater complexity and biological evolution toward greater complexity.

Wright's argument that biological evolution has an arrow as well –tends to produce animals with big brains that think – runs roughly as follows:

Life starts out simple. It then evolves, with variation and with the conservation and spread of successful variations. Thus evolution generates increasing diversity, and increasing diversity generates increasing complexity: it is hard for a one-celled organism to become less complicated (although viruses have managed), and easy for it to

become more complicated.

But wait! Most of your environment is made up of other living creatures. Hence the environment becomes more complicated over time too. And because the environment becomes more complicated over time, there is increasing adaptive value in information acquisition and information processing organs: better eyes (and ears) and bigger brains. Random evolution creates increasing diversity and complexity of life. Increasing diversity and complexity of life make for a more complicated environment. And a more complicated environment generates strong evolutionary pressure for eyes, hands, and brains.

Maybe his biological argument is right – I'm inclined to think it probably is – but maybe not. Big eyes and big brains are expensive in terms of energy. Why not go for bigger teeth or stronger legs? And large complicated animals seem to be (so far) at a disadvantage in species survival when the asteroids hit.

If there is additional discussion of this review, you may access it through the network, at:

http://eh.net/

Citation: J. Bradford De Long. Review of Wright, Robert, *Nonzero: The Logic of Human Destiny*. EH.Net, H-Net Reviews. July, 2000.

URL: http://www.h-net.org/reviews/showrev.php?id=4302