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A REVIEW OF DAVID SLOAN WILSON'S
EVOLUTION FOR EVERYONE AND DARWIN'S CATHEDRAL

A Review of David Sloan Wilson, *Evolution for Everyone: How Darwin's Theory Can Change the Way We Think about Our Lives*. Delacort Press, 2007. 400 pages. David Sloan Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. Chicago: University of Chicago Press, 2002. 268 pages.

It will not come as a shock that Americans are deeply divided about evolution. Attacks by the religious right on science are constant and intense. If you are looking for a scientific culture warrior to do battle with the Rush Limbaughs of the world, then David Sloan Wilson is not your man. In a gentle and persuasive manner, he tackles the other "evolution problem," not the one on talk radio, but the one that is rife throughout the ivory tower.

Almost every academic in the humanities and social sciences believes evolution has a place in the biology classroom. However, our defense of science is as much or more a rejection of religious conservatism than an embrace of science. *Of course* people are the product of evolution—as long as it is understood that virtually every aspect of human culture is completely socially constructed. The idea that our brains and emotions are the products of evolution, or that society and culture can be understood from an evolutionary perspective, violates some of the most powerful and sacred taboos of the ivory tower. To argue otherwise would risk embracing, as one friend put it to me, "the new generation of scientific racism."

No one makes a more elegant case for evolution, and how it can be applied to the study of culture, society and religion than David Sloan Wilson. *Evolution for Everyone* is engaging and easy to read, the writing clear and concise, and the arguments powerful and far ranging. It is written for the educated public, but provides a serious and thoughtful introduction to evolutionary theory. Let us begin with it first.

Wilson is a scientist and a dreamer. He is a noted biologist who dreams of the day when both scientists and humanities professors in the ivory tower of Babel, or rather the "ivory archipelago," share the same language and intellectual framework. Like his fellow evolutionist, E.O. Wilson, David Sloan Wilson believes in the possibility and desirability of the unity of human knowledge. And the only intellectual discourse simple enough, strong enough, and flexible enough to accommodate the study of the natural and human world is evolution.

As Wilson explains it, the theory of evolution is quite simple. Within every species, including humans, there is variation of height, speed, strength, etc.

Second, some of those variations prove highly adaptive. Third, the mechanism for transmission of advantage is genetic. Insects whose coloration blends in with their environment may confer an advantage in hiding from predators. Over succeeding generations, their progeny spread while those of insects that stood out are culled from the gene pool. Is that it? In the main, yes.

To illustrate the power of this way of thinking, consider the subject of infanticide. Since natural selection is all about having offspring, it might seem pathological to kill them. Nevertheless, with a little effort you might be able to think of some environmental situations that make infanticide adaptive. In my class [a survey open to all majors entitled "Evolution for Everyone"] I have the students turn to their neighbors to discuss possibilities for a few minutes before telling me their suggestions. They reliably identify the...situations that make infanticide adaptive. The first is *lack of resources*...the second is *poor offspring* ...the third is *uncertain parentage*... The message of this exercise is simple but profound: *how did my students become so smart?* Their evolutionary training had only just begun, but even a tiny bit enabled them to become experts, honing in...on the predictions made by the experts. That is the power of natural selection thinking that makes it such a big deal. (19)

Wilson believes that evolution is not only for everyone, but everyone can engage in science. In his view, science is a matter of being intellectually honest, being willing to account for alternative possibilities and explanations, and then rolling up your shirt sleeves and getting to work.

Wilson provides short, readable chapters that build on the lessons from the previous ones. For instance, the next chapter explains how and why burying beetles regulate the size of their brood to the size of the available food source. (The parents kill some larvae so the rest can thrive). The burying beetle has evolved a number of amazing adaptations, from prodigious digging capabilities, to enormous strength, to the ability to secrete anti-bacterial materials. Wilson's wide-eyed wonder at the stark beauties of the natural world, and how evolution allows us to understand it, is infectious.

This chapter also reveals another important lesson. The first is that the scientific method can be understood by even history or religion professors (!). The second, is that once a fact has been arrived at, it remains a building block available for others to use in the expansion of human knowledge. And once armed with the theory of natural selection, anyone can become informed and teach the experts.

For instance, Margie Profet, who had an undergraduate degree in political science, became one of the youngest recipient of the MacArthur genius grant in 1993 for her evolutionary explanation of "morning sickness." After getting a masters in physics, she dropped out, and became (in her words) a "bum." She befriended some evolutionary biologists, and became interested in why pregnant

women suffered nausea, often refusing to eat foods that should have made them and their child healthier. She immersed herself in the literature. As Wilson points out, “recall that facts are like bricks—durable and easily produced, but useless until assembled into a larger structure.” (77). Profet used evolutionary theory as her guide and assembled evidence that suggests that this sickness was not a disease that needed to be cured, but an adaptation that protected embryos from disease.

The most challenging aspect of his work is how evolution has worked on our brains. Unlike the conventional wisdom of the academy, most of our brains are not under our conscious control. Wilson argues that we have stone-age brain in a modern world. Our brains evolved under the pressure for survival, and our ancestors often lived in resource-poor environments. So humans evolved an enormous taste for calorically-dense and fatty foods that conferred advantages on our ancestors. In a fast-food nation, this aspect of our evolved brains means we are defenseless in the face of chocolate and cheeseburgers.

Wilson may call himself a “genetic determinist,” (one chapter is called “How I learned to stop worrying and love genetic determinism,”) but he also believes environmental conditions are critical to understanding behavior. For instance, humans are an exceptionally social species. Our facility with language is what allowed us to succeed. For instance, Neanderthals were bigger, stronger and even had larger brains than *Homo Sapiens*, but they lacked the human capacity for language, and hence cooperation in hunting and warfare. Our ancestry in hunting and gathering groups, where guarded egalitarianism was the norm, leaves us enormously sensitive to the large differences in social status that arise since the Neolithic revolution.

Fast forward to modern Chicago. There is a twenty year difference in male life expectancy between the richest and poorest neighborhoods in the city. (As the evolutionary epidemiologist Richard Wilkinson has argued, much of that difference lies in the physiological response of humans to social inequality). Wilson summarizes the work of evolutionists Martin Daly and Margo Wilson who show how people respond to the inner-city environment. Humans are acutely sensitive to our life chances, although much of this is unconscious. Children born in stressful or low-resource environments mature faster. Women have children at younger ages, in part, they argue, so that grandmothers can help safeguard their offspring. Murder rates also vary wildly between neighborhoods and are strongly predicted by death rates by other causes. In other words, the environment is critical to understanding how our stone-age minds will respond to our world.

But how does this apply to the study of religion? This brings us to *Darwin's Cathedral*. Wilson argues that religion can be best understood from an evolutionary perspective. Due to our enormous brain, capacity for symbolic thought and communication, evolution can function via culture as well as genes. Individuals cooperate to produce goods that they could not obtain as individuals. This raises the “fundamental problem of social life.” One on one,

cheaters will best altruists every time; yet groups of solid citizens beat out groups of cheaters every time. Thus individuals or their families are not the only means of natural selection. In the insect world, hives function as a superorganism, allowing even genetically unrelated individuals to thrive and spread.

In the human world, religions function as a kind of "superorganism." Various religions arise and fall, and some of that cultural variation is well adapted to both the environment of its time and the evolved psychology of humans, advantages accrue to its members. The water temple system of Bali efficiently allows the distribution of water through canals, the control of pests, and the resolution of conflicts. If it did not exist, it would be necessary to invent it. Early Christianity provided not only emotional support, but encouraged its members to care for each other during the recurrent outbreaks of disease. Unlike Roman society, it encouraged its members to be fruitful and multiply; its rapid spread was as much demographic as ideological. Early Calvinism demanded its adherents subordinate their individual wants and desires to that of the group, and in the process, created a cohesive and productive society out of what had been a highly fractious one. As in other aspects of natural selection, there are costs as well as benefits to these adaptations; Wilson does not ignore the fact that the love of your co-religionists may well coexist with the hatred of the other. Wilson is not making a case for or against religion, but seeking to begin to interest others in understanding the dynamics of religious or social life from this perspective.

Wilson is extraordinarily appreciative of the insights and skills of those in the humanities. He acknowledges that applying evolution and the scientific method to the complexity of society and cultural institutions will take the cooperation of many and last for many years. Unlike virtually all theories of modern or post-modern life, evolutionary theory is deceptively simple, but with enormous potential to examine the complexities of life, consciousness and society. For those who take theory seriously, evolution should be carefully examined, and there is no better person to begin that conversation with than David Sloan Wilson.

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