

# Adaptationist speculations, and some experiments—not the power of evolution

*Evolution for Everyone*

David Sloan Wilson

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This book is non-technical in nature. It differs from most books on evolution, which tend to be rather abstract and to elicit little interest from laypersons. True to its title, it enjoys a relatively large readership that persists despite its vintage.

This is not to say that this book is necessarily an easy read. Wilson drifts from topic to topic, and this makes the book, as an entirety, rather unfocused. He gets into everything from beetle evolution to religion, human communities, human psychology, and a welter of other subjects. The ‘if it exists, it must have arisen by evolution’ mindset permeates Wilson’s thinking, and he finds a creative way of ‘dubbing in’ evolution into every topic he brings up. When it comes to human behaviours, Wilson invokes ‘neural Darwinism’, in which human thought and culture are supposed to have evolved very rapidly (pp. 72–73).

## Wilson on religion

Wilson readily admits that his background is not at all religious (p. 236). He surveys theories of religion, including those that invoke once-adaptive but now-fossilized ‘memories’ of past small human groupings, the persistence of parasitic cultural hearsay (memes), and the byproduct of genetically favoured human associations.

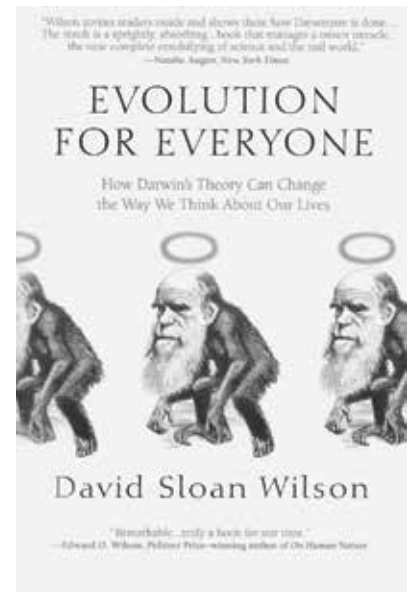
He rejects the notion that religion originated to allay fear of death, pointing to the fact that many religions de-emphasize the afterlife, while many other religions’ concepts of the afterlife are unattractive. He also disagrees with those who bash religion as irrational, and tending towards causing war and persecution. Wilson points out that many human ideas and activities are variously irrational or causative of wars and persecution.

The author considers religion as a mixture of the rational and irrational, which mirrors that of the human mind, which ostensibly invented religions. Wilson reduces religions to the adaptationist explanation of drawing groups of people together. What matters is not the rationality or irrationality of the belief, but the success in which it draws groups of people together and thereby enhances their survivorship. Religions themselves grow through a form of social and historical natural selection. Beliefs that are weak or minimally adaptive tend to die out. On the other extreme, some beliefs eventually grow into world religions.

The author states that the religions that he admires the most are ones such as Buddhism and Confucianism, which have what he considers a relatively rational outlook, and ones that have a strong ‘horizontal’ (people-to-people) component in preference to ‘vertical’ (human-to-deity) emphasis.

## A dubious theology

Wilson writes that “First, we must abandon the notion that some special quality was breathed into us by a higher power” (p. 68). He then performs the obligatory citing of those who profess to believe in God and



evolution. In promoting naturalism, he tries to equate the invoking of God as supernatural Creator with the person with a malfunctioning car who prays to God to fix the car instead of calling a mechanic, or a doctor who prays for healing of a patient instead of treating him. This silly reasoning ignores the fact that God performed miracles during the creation process, and subsequently at certain specific places and times, but generally does not do so otherwise.

In common with many critics of the Bible, the author cites 1 Samuel 15 as a biblical sanction for infanticide (p. 33). Let us leave aside possible theological reasons for the killing of Amalekites. Ironically, in another context, Wilson cites Calvin on “abandoning the hubris that you can know God’s will” (p. 37). It is obvious that Wilson himself is the worst offender in terms of such hubris!

The author, while discussing religion in some detail, shows astonishing ignorance in his statements. He makes disparaging statements on the historicity of the Gospels (p. 320), and latches on to the ‘alternative Christianities’ fad.

Wilson faults ID proponents because they “can’t even tell us if the intelligent designer is a god” (pp. 36–37). Ironic

to this, evolutionists usually attack ID for the *exact opposite* reason: ID (incorrectly) presupposes the existence of God, and is therefore ‘disguised religion’ and ‘repackaged creationism’.

### Some whoppers

Notwithstanding the fact that Wilson wrote his book for the layperson, or perhaps all the worse because of that, much of his writing frankly reeks of superficiality. He makes a jibe about his “aching back and wobbly knees” warranting him to “demand a recall” from a god or intelligent agent (p. 3).

Moreover, Wilson makes some truly amazing statements. He states that, in the past, “religious tracts claimed that Negroes didn’t have souls” (p. 13). Perhaps such attitudes existed even among some of the religious, but the whole history of Christianity had overwhelmingly been the exact opposite. It had been characterized by missionary work among non-Christians of ALL races. This, of course, implied belief that all humans have souls, and are capable of spiritual and moral literacy. He also claims that Darwin opposed slavery (p. 11), which, even if true, does not conceal Darwin’s fundamental racism.

Some of Wilson’s statements are particularly amazing. For instance, he attributes to the Hebrews the belief that light was created before the sun because the Hebrews did not realize that light comes from the sun (p. 262)! Over the years, I have read numerous infidel attacks on the Bible, and have never heard *that* one before. How can anyone, no matter how ‘backwards’, possibly experience the day–night cycle, especially in the absence of electric lighting, and not make the obvious connection between the sun and light?

### Just-so stories in perspective

Wilson notes that adaptationist explanations are often rejected as just-so stories. Moreover, even some evolutionists, such as the late Stephen

Jay Gould, had this attitude (p. 59). Wilson admits a large degree of just-so storytelling as he comments, “These ideas about dance, music, and the visual arts are admittedly speculative” (p. 188). He then defends just-so storytelling by the fact that it leads to thinking, and to untested hypotheses that may become tested. In addition, he stresses the fact that adaptations can be tested, and, as elaborated in the next chapter, does so in relation to his expertise on infanticide in beetles (figure 1).

### Infanticide legitimized—why certain beetles kill their young

Wilson describes his experiments on the beetle *Nicrophorus*. This beetle finds, and then buries, small carcasses, such as those of mice and baby birds. He found that the female lays the same number of eggs regardless of the availability of carrion, and that offspring grow to the same size regardless of this availability. However, the number of new adults ends up being proportional to the amount of carrion available. Wilson found that the mothers kill enough of their young until the number of young feeders matches the carrion available.

Perhaps this described experiment is the only substantive portion of this book. He cites his successful experiment as proof that ‘just so’ adaptationist explanations need not be, especially if they can be tested and then verified experimentally. Even if so, the results of his experiment raise more questions than answers. Why did the evolutionary process produce a system that wastes one’s resources in having offspring that one must later kill? Why did natural selection not favour, instead, a timed burst of offspring only during episodes of plentiful resources (as in the extreme case, for example, of certain desert plants)? Why did not natural selection allow for the offspring to grow more much slowly in order to ‘wait out’ the shortage of food? Finally, why not evolve more efficient systems for procuring food (which,

furthermore, is not needed in large amounts to sustain an insect), instead of remaining so vulnerable to carrion-dependent food shortages?

In addition, the non-explanatory power of even an experimentally verified adaptationist explanation for infanticide among beetles becomes obvious when considering even insects as a whole. Food shortages, of one kind or another, are very common in nature, yet most insects do not kill their young as a defense against food shortage, yet survive and proliferate just the same.

Ideas have consequences, and evolution was once used to justify things such as war and racism. Nowadays, evolution is used to legitimize anthropological universalism, because that is what is popular in intellectual circles. Wilson defends infanticide, in the broad-based sense, as having positive adaptive value (e.g. p. 19). What is to prevent evolution from legitimizing infanticide, if that is what the trend-setters want? [We already have a form of sanctioned infanticide in the form of abortion rights, albeit framed in terms of ‘reproductive rights’.]

### Does an experimentally verified adaptation imply its own cause?

Let us expand the foregoing. Adaptationist explanations, even if supported by experiment, do not necessarily tell us why they evolved, even if one already accepts evolution as fact. Consider, as an example, the origin of bird flight. One could design an experiment that would verify the intuitively obvious supposition that a better flier has an improved chance of escaping a predator, and/or avoiding becoming prey, than a slower flier. On the other hand, consider the possibility that feathers first evolved as a means of making the bird seem larger and therefore more ferocious, and only secondarily evolved (that is, became exapted for flight? Finally, what if feathered birds emerged from sexual selection—the tendency of females to prefer mates that are better endowed with feathers, and later the ability to flirt by flying to and away?



Photo: Wikimedia/Fir0002

**Figure 1.** There is an astonishing variety of beetles in existence. Some of them engage in infanticide, as elaborated in the text.

Finally, if we rely on the fossil record to help answer these questions, this assumes that the appearance of a trait in the fossil record necessarily reflects its relative time of origin. In any event, if one relies on the fossil record to try to infer what led to the evolution of volancy in birds, it is then a tacit admission that adaptationist explanations, even if supported by an experiment that ostensibly removes the onus of ‘just-so’ stories, are still inadequate. Clearly, they, by themselves, do not suffice as evolutionary explanations for the origin of major traits among living things.

### Adaptationist explanations do not explain the *origins* of these adaptations

Most significant of all, Wilson tacitly admits that the operation of natural selection, in terms of adaptations, has limited relevance to the *origins* of these adaptations. He writes:

“By contrast, consider the challenge of figuring out the ancestry of species in the great branching tree of life (phylogeny) that was dear to the heart of Steve Gould. This is a difficult job because the fossil record is incomplete and living species can be similar *either* because they share a common ancestor *or* because they have converged on the same traits despite being distantly related. For example, dung beetle species with horns on their snouts might be similar because

they share a common ancestor, or because they independently adapted to a nocturnal way of life. Advances in molecular biology have revolutionized our ability to resolve questions such as these. Sometimes the phylogenies based on older methods are confirmed by the new methods, but often they prove to be spectacularly wrong [emphasis in original]” (pp. 61–62).

From these statements, Wilson tacitly admits that adaptationist-oriented evolutionists, like him, must often fall back on molecular biology. This, itself, is a tacit admission that adaptationist explanations, by themselves, are inadequate. Furthermore, different lines of evidence in evolutionary thinking (adaptationist considerations, and molecular biology) are frequently in conflict. In addition, molecular biology has its own problems relative to inferred convergence, quite apart from the underlying assumption that similarities in molecular biology arose from evolution and not special creation.

### Just-so evolutionary stories on sex and violence in urban areas

Wilson wanders into the waters of sociology, bringing his evolutionary baggage with him. He brings up the commonality of teenage mothers in American inner cities, and this he attributes to the adaptationist tendency of wanting to live to see one’s grandchildren, given the uncertainty of long-term survival in a violent environment. It is unclear how living to see one’s grandchildren necessarily confers a selective advantage to the passing on of one’s genes, although one can certainly come up with a just-so answer.

In addition, even though the violent death rate in the American inner city is higher than in other parts of the city, relatively few inner-city dwellers die young. In addition, Wilson ignores the fundamental fact that pregnancy among mothers who are teenagers, or even children, was once accepted and common in various human societies,

and not only in those where the risk of death from violence was relatively common. Finally, correlation is not necessarily causation, and it is unclear if the emergence of a more secure long lifespan and delayed tendency of pregnancy exist in a cause–effect relationship.

Wilson observes that young males in the American inner city are prone to kill even at the slightest perceived insult, which would seem to be very maladaptive. He suggests that it is, instead, quite adaptive, because, owing to the paucity of opportunities of self-advancement in the inner city, a male’s status is the only thing that he has going for him. This he must guard very jealously. Wilson also suggests that, contrariwise, in a benign environment, the male is not in a position where he is forced to defend his status at all costs, and so violence and homicide would be maladaptive (p. 97).

Again, Wilson’s evolutionary storytelling flies in the face of elementary facts. Dueling, for example, was once generally accepted, and not only among members of disadvantaged classes or peoples. It certainly occurred among members of the upper classes, where there were numerous and varied opportunities for the achievement and persistence of a male’s status—ones hardly threatened by a perceived or actual verbal slight.

### Adaptationist implications of being Scotch–Irish [sic]

Some of Wilson’s ideas make for strange reading. Can even the traits of a nationality be reduced to evolutionary adaptations? Wilson goes as far as resurrecting ways of thinking that were once relatively common, but are now frowned upon as being flirtatious with racism, or at least in conflict with the prevailing liberal notion that behavioural differences between peoples (and, in extreme, even differences in gender) are primarily caused by the environment.

Wilson seriously suggests that the culture of the American south owes to most southerners being Scotch–Irish, in which the original herding culture favoured self-defense, a strong code of honor, and the use of violence to defend one’s interests (pp. 227–231). He invokes this idea to explain things as diverse as adult southerners demonstrably being hormonally reactive to verbal insults, southern children raised to fight against bullies, and the tardiness of the surrender of the Confederacy during the American Civil War (long after any hope of victory had disappeared).

Wilson’s explanations make little sense. To begin with, the standing up to bullies, the avoidance of dishonor at the battlefield, and the continued fighting of a war in the face of adverse military realities are hardly limited to any herding-heritage nationality. They are quite common, if not virtually universal.

Trying to pigeonhole certain traits on the Scotch–Irish is seriously misplaced. To begin with, it is not only white American southerners, but whites elsewhere in the USA, that are largely of Scotch–Irish descent. Why, then, do most American whites not behave like American white southerners are supposed to behave? Expanding this matter to an international scale, both American and Australian whites are largely of Scotch–Irish descent, yet there are significant differences in terms of such things as aggression. Australians are said to be generally more submissive to authority than are Americans. Thus, for example, the USA got its independence early from the British crown, and then by violent revolution, while the Australians got theirs much later, and then through peaceful means.

### **Just-so stories on modern human obesity**

Wilson suggests that we crave salt and sugar because these had been

rare commodities in earlier times. His reasoning is unclear. Even though salty and sweet foods had commonly been unavailable in earlier times, why should the humans not have evolved some means of regulating their appetites for these items when they *were* abundantly available in the past? Alternatively, is Wilson implying, in an *ad hoc* manner, that such times were too infrequent, before modern times, to produce significant selection pressures for such an evolutionary development?

What if cravings for sweet and salty foods have nothing to do with evolutionary adaptation (even if one believes in evolution)? What if obesity had been maladaptive even in ‘prehistoric’ times? For instance, notwithstanding the protection it afforded against certain-to-happen food shortages, what if being obese made it less likely to escape a predator by running away, or climbing a tree? In addition, what if being obese made one a more attractive target to a predator because the obese person was a more massive food source, and thereby more rewarding for the predatory effort? In addition, what if the high fat content (high food energy) of the obese-human prey was its own additional reward? Finally, what if predators became naturally selected to target preferentially obese individuals owing to one or more of these reasons?

What if the obesity common in Western societies actually stems not from a genetically determined drive to overeat as a hedge against likely food shortage, but from the ease of humans forming an emotional relationship with food—a relationship encouraged in modern times by the atomization of society, and strongly discouraged in past ages by the then-frequent shortage of food?

What if obesity in modern societies is caused by the industrial production of food, wherein the finely mechanically ground grains are digested too rapidly, causing a large, maladaptive glycemic rise and crash—thereby

provoking easy fat storage that is further aggravated by overeating to relieve the blood sugar crash? If so, then modern obesity would be a technologically caused problem. If one must believe in evolution, one could then think of modern obesity as a result of our evolutionary inexperience with a plethora of highly glycemic foods, not our evolutionary inexperience with a constant and uninterrupted supply of food. Finally, if one is willing to accept creation, one can think of our bodies as intelligently designed machines—which, like all machines, malfunction when deliberately or unintentionally misused.

### **Conclusion**

Throughout this work, Wilson suggests that the implications of evolution have not been fully appreciated, and have not been allowed to illuminate fully many aspects of the human condition. This he blames primarily on what he thinks is a widespread unnecessary fear of the implications of evolutionary theory, and not only by ‘religious people’. Wilson wants nothing less than for us to “think of ourselves as 100% a product of evolution and how this way of thinking can help us discover a more sustainable way of life” (p. 73).

Apropos of this, Wilson admits that, for example, modern medicine advances quite well without embracing evolution. He writes:

“Medical science is highly sophisticated in its own way, but it seldom avails itself of natural selection thinking. Most doctors and medical researchers believe in evolution as a matter of course, but their exposure to evolutionary theory in medical school is close to zero and they don’t think about it in relation to their profession” (pp. 80–81).

Could it be, instead, that evolution is not more widely applied because it is irrelevant?