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IN DEFENSE OF SIMONIAN SCIENCE

David Diekema and Patrick McDonald

In his recent book Where the Conflict Really Lies, Alvin Plantinga articulates a number of arguments about the conceptual relationship between science and faith, especially Christian faith. He uses Herbert Simon's evolutionary account of altruism and David Sloan Wilson's evolutionary account of religion as exemplars of theories that are in genuine but superficial conflict with Christian faith. This paper argues that any conflict between Christian faith and evolutionary psychology or Simonian science is even more superficial than Plantinga himself admits. We argue that apparent conflicts between Christian control beliefs and social scientific theorizing are due predominantly to (1) misunderstanding the scope of a theory (or the terms used in a theory) or (2) metatheoretical overreaching on the part of one side or the other. Specifically, the apparent conflict between Simon's account and Christian faith is rooted in a misunderstanding of Simon's limited definitions of rationality and altruism. The apparent conflict between Wilson's account and Christian faith is a result of failing to distinguish Wilson's broader metatheoretical commitments from the more limited scope of his scientific theory of religion.

There have been numerous calls for Christian scholars to relate their faith beliefs directly to their scholarship.¹ Alvin Plantinga, among others, suggests that the behavioral sciences are one area where Christian control beliefs² are likely to have a significant impact.³ This is presumably because much of what goes on in the human sciences is not neutral with regard to religious beliefs and often proceeds on the basis of metaphysical or





¹See for example Wolterstorff, *Reason within the Bounds of Religion;* Marsden, *The Outrageous Idea of Christian Scholarship;* Plantinga, *The Twin Pillars of Christian Scholarship;* and Van Leeuwen, *The Sorcerer's Apprentice.*

²Christian control beliefs are those central tenets of the Christian faith that operate as basic background beliefs, and that are taken to control the direction of one's metatheorizing and theorizing in one's respective discipline (Wolterstorff, *Reason within the Bounds of Religion*, 67).

³Plantinga, *Twin Pillars of Christian Scholarship*, 60; "Methodological Naturalism, Part 1," 12. See also Plantinga, "Methodological Naturalism, Part 2"; Evans, "Christian Perspectives on the Sciences of Man"; Evans, *Preserving the Person*; Evans, *Wisdom and Humanness in Psychology*; Van Leeuwen, *The Person in Psychology*; Gaede, *Where Gods May Dwell*; Perkins, *Looking Both Ways*; Jeeves, *Psychology and Christianity*; Myers, *The Human Puzzle*; and Lyon, *Christians and Sociology*.

metatheoretical⁴ assumptions that are quite opposed to religious beliefs.⁵ In his most recent book, *Where the Conflict Really Lies*, Plantinga argues that there are some cases of genuine conflict between religion and science. While ultimately these are considered to be superficial conflicts, in that they do not provide defeaters for Christian or theistic belief, they are non-trivial in the sense that a Christian will want to reject those theories that are in real, direct conflict with theses (knowledge) that Christians accept on the basis of their broader knowledge structure.

Two examples of theories in conflict with Christian control beliefs, suggests Plantinga, are Herbert Simon's evolutionarily-driven rational choice theory of altruism and David Sloan Wilson's evolutionary account of religion.⁶ Plantinga uses Simon's work, in particular, as an exemplar or placeholder for theories that are in at least superficial, if not deep, conflict with Christian control beliefs.

[S]ome scientific theories or claims—theories or claims taken from evolutionary psychology and historical Biblical criticism—do indeed conflict with Christian (and Muslim and Jewish) belief. Evolutionary psychologists have come up with a number of theories that are wholly incompatible with Christian beliefs: theories purporting to explain altruism in terms of unusual docility and limited rationality, morality as an illusion fobbed off on us by our genes, and religion itself as involving belief that is false. . . . [E]volutionary psychology contains many widely accepted theories and claims that (at least as they stand) are in conflict with Christian belief. And let's call scientific theories incompatible with Christian belief Simonian science, in honor of Herbert Simon and his theory of altruism.⁷

It might be instructive to take a close look at both the Simon case and the Wilson case to examine the extent to which there is even a superficial conflict between these theories and Christian control beliefs.

This paper will argue that any conflict between Christian faith and evolutionary psychology or Simonian science is even more superficial than Plantinga himself argues. Specifically, we will argue that the apparent conflict Plantinga sees between Simon's account of altruism and Christian faith is rooted in a misunderstanding of the way Simon is defining rationality and altruism. When this misunderstanding is resolved, the appearance of conflict dissolves. We will then argue that the apparent conflict Plantinga sees between Wilson's account of religion and Christian faith is rooted at the metatheoretical level, and once unnecessary metatheoretical assumptions

⁴There are several definitions of metatheory in the social sciences. For the purposes of this paper, metatheory will be used to designate any assertions, background assumptions, metaphysical claims, etc. that are non-essential to the particular scientific theory in question. For the most part these are claims or assumptions that are not taken as testable and provide a more general interpretive framework for placing a particular theoretical explanation.

⁵Plantinga, "Methodological Naturalism, Part 1," 2.

⁶Simon, "A Mechanism for Social Selection and Successful Altruism"; Wilson, *Darwin's Cathedral*.

⁷Plantinga, Where the Conflict Really Lies, 163–164.

are eliminated from Wilson's scientific theory proper, no conflict exists. We argue more generally that apparent conflicts between Christian control beliefs and social scientific theorizing are due predominantly to these two general issues: (1) misunderstanding the limited scope of scientific theories and the terms used in such theories or (2) failing to properly disentangle those statements essential to a scientific theory proper and those statements that make up the general metatheoretical framework of the scientist/theorist in question. We argue that if science is done properly, and is properly evaluated, the two cases of science-religion conflict identified by Plantinga are not cases of conflict at all. In fact, Simon's theory and Wilson's theory may actually exemplify a deep concord between religion and science. Assuming Plantinga picked two potentially strong cases of real conflict between religion and science to make his case, this raises the question as to whether the set of scientific theories actually in conflict with Christian belief is, in fact, an empty set.

The Simon Case

The question Simon addresses is: can neo-Darwinian science adequately account for the presence (and presumably, the persistence) of altruism on a substantial scale in human societies? Important here is that Simon defines altruism in purely genetic terms:

By altruism I mean behavior that increases, on average, the reproductive fitness of others at the expense of the fitness of the altruist. Fitness simply means expected number of progeny....

Notice that "altruism" and "selfishness" in genetics bear no close resemblance to these terms in everyday language.⁸

So how do we account for the behavior of people like Mother Teresa who devote their lives to the welfare of others, when the rational way to act is to increase one's personal fitness, i.e., egoistically, thus increasing the likelihood that one's genes will be disseminated into the next generation?⁹ Of course, the underlying mechanisms involved in this egoistic tendency are unlikely to be fully conscious. Rather they are likely to function as drives (e.g., the "sex drive") or as behavioral tendencies rooted in temperament, emotion, preferences, etc. But, in any case, for a rational choice theorist or evolutionary behavioral scientist, altruism becomes a "problem" to be explained. That is, it is behavior that would seem to run counter to the natural tendency of self-preservation and propagation of one's genes.

Simon's explanation of the Mother Teresas of the world involves the concepts of "docility" and "bounded rationality." Docility is the tendency of some individuals to conform to society's expectations of them without

⁸Simon, "A Mechanism for Social Selection and Successful Altruism," 1665.

⁹The terms "rational" and "egoistic" are used in highly circumscribed ways as well. "Rational" would be defined in terms of a particular outcome and/or preference structure—in this case, amassing progeny. "Egoistic" as well would be defined in terms of behavior that is narrowly focused on protecting one's genetic lineage.

fully thinking through the implications for personal fitness. Bounded rationality is actually a more general concept that would incorporate docility. Bounded rationality refers simply to the general fact that people often do behave in "irrational" ways, in that they do not behave optimally because of imperfect or incomplete information, imperfect information processing, normative constraints, cognitive shortcuts, etc. The empirical and theoretical investigation of bounded rationality has blossomed in recent years and is coming to play a much larger role in economics, psychology, and sociology when discussing human decision-making and action. Bounded rationality does not imply a negligent irrationality on the part of the actor. Rather, it simply recognizes the inherent limitations on rational thought rooted both in the individual organism (cognitive limitations) and the environment (lack of quality information, time pressures, etc.). In any case, the Mother Teresas of the world, as a result of docility and generally bounded rationality, behave less than optimally in regard to gene propagation. Hence, on Simon's theory, Mother Teresa behaved in a sub-optimal and, hence, less than perfectly rational way.

Plantinga argues that such an explanation is anathema to the Christian perspective. Simon's theory of altruism is a prime example of how science is anything but religiously neutral. Here is Plantinga's argument in his own words:

No Christian could accept this account as even a beginning of a viable explanation of the altruistic behavior of the Mother Teresas of the world. From a Christian perspective this doesn't even miss the mark; it isn't close enough to be a miss. Behaving as Mother Teresa does is not a display of bounded rationality — as if, if she thought through the matter with greater clarity and penetration, she would cease this kind of behavior and instead turn her attention to her expected number of progeny. Her behavior displays a Christ-like spirit; she is reflecting in her limited human way the magnificent splendor of Christ's sacrificial action in the atonement. (No doubt she is also laying up treasure in heaven.) Indeed, is there anything a human being can do that is *more* rational than what she does? From a Christian perspective, the idea that her behavior is irrational (and so irrational that it needs to be explained in terms of such mechanisms as unusual docility and limited rationality!) is hard to take seriously. From that perspective, behavior of the sort engaged in by Mother Teresa is anything but a manifestation of "limited rationality."¹⁰

Plantinga suggests that to propose that people like Mother Teresa have the trait of docility and bounded rationality, as Simon does, implies that they are somehow defective, unintelligent, and lack acuity—"this limited rationality is a matter of running a quart low, of playing with less than a full deck, of being such that the elevator doesn't go all the way to the top floor."¹¹ He also suggests that when Simon assumes that the rational course of action is to strive to promote fitness, he is using the term "rational" to

¹⁰Plantinga, "Methodological Naturalism, Part 1," 3.¹¹Ibid.

mean "properly functioning," such that a properly functioning human being (i.e., one who is not insane, under undue stress, or defective in some other way) will have as one of his or her goals or motivations to promote or maximize fitness. As such, this use of "rational" as involving proper functioning is a normative use of the term.

Rationality, however, is a deeply *normative* notion; the rational course is the right course, the one to be recommended, the one you ought to pursue. Simon, therefore, seems to be making a normative claim, or perhaps a normative assumption; it is a vital and intrinsic part of what he means to put forward.¹²

On Plantinga's reading, Simon's account assumes that a properly functioning human being *ought* to behave in a way that promotes fitness. This assumption flies directly in the face of Christian control beliefs and, as such, Simon's account is inconsistent with Christian belief.¹³ To be fair, in *Where the Conflict Really Lies*, Plantinga is somewhat less harsh with Simon, but re-asserts his substantive claims.

But is Simon's theory really in conflict with Christian beliefs? A fair interpretation of Simon may actually suggest a deep concordance between Simon's account and Christian belief.¹⁴ As stated earlier, Simon has a very narrow, genetic definition of altruism, one based on expected progeny. When Plantinga states, "Why, asks Simon, do people like Mother Teresa do the things they do? Why do they devote their time and energy and indeed their entire lives to the welfare of other people?,"¹⁵ he seems to be misinterpreting the question Simon is actually asking. Simon's question would be more the following: Given that devoting one's life to the welfare of others is likely to be costly in terms of reproductive success (i.e., in moving one's genes into the next generation), and given that altruism likely has some genetic basis, as would selfishness or egoism, how is it that altruism continues to show up in human societies, i.e., why is altruism not selected out by evolutionary pressure?¹⁶ In Simon's own words:

In any event, our goal is not to establish how much or how little altruism, in either sense, there is in human behavior, but rather to show that altruism on a substantial scale is not inconsistent with the strictest neo-Darwinian assumptions.¹⁷

¹²Ibid.

¹³Ibid., 5.

¹⁴This paper makes no claim about the scientific validity of Simon's theory. The question being addressed is simply whether or not it is in conflict with Christian beliefs.

¹⁵Plantinga, "Methodological Naturalism, Part 1," 2.

¹⁶See Rushton et al., "Altruism and Aggression." What is inherited is, of course, open to question. Altruism is not a specific behavior pattern likely to be controlled by a single gene or even a gene that is directly linked to a particular behavioral tendency. What is inherited is likely to be something more diffuse, such as the tendency to empathize with others, or docility, or norm internalization.

¹⁷Simon, "A Mechanism for Social Selection and Successful Altruism," 1665.

On a neo-Darwinian account, if altruism involved significant costs in terms of fitness, i.e., reproductive success, then it would be eliminated. The issue is not so much an account of the underlying motivation for the individual (e.g., is a particular altruistic behavior or lifestyle motivated by devotion to God, by selfishness, or by lack of mental acuity), but rather why a behavior pattern continues to exist in a society (or population) that would appear, on the face of it, to make one less genetically fit.

It is important to keep in mind here that genetic altruism has at most partial overlap with what we ordinarily think altruism to be, or for that matter, selfishness. What may appear to be very selfish behavior in terms of everyday definitions of selfishness would count as altruism on Simon's definition. On Simon's account, working day and night for the good of one's company, and at the same time for the good of one's paycheck in terms of increased wages, would be construed as altruistic to the extent that it decreased the time and energy available for reproduction for oneself relative to others. At the same time, giving large donations to various charities may actually be very selfish behavior to the extent it makes one more attractive and provides opportunities to meet new potential sexual partners.

A proper evaluation of Simon's theory requires us to see his theory for what it is: an attempt to demonstrate that altruism, as defined narrowly in terms of its impact on genetic fitness, is not inconsistent with a neo-Darwinian account of human evolution. Is this attempt somehow inconsistent with a Christian worldview? Let's take a closer look at Simon's account as we answer this question.

As it turns out, Simon's model of altruism actually assumes that altruists, by and large, are *fitter* than selfish individuals. Why are they fitter? Not because of their altruistic behavior, but because of their docility.¹⁸ Docility as defined by Simon is the disposition to be taught. That is, a docile individual is one who is highly teachable or especially adept at social learning. Hence, a docile individual is better able to learn social norms and expectations among other things, such as job or academic skills. Docility in combination with bounded rationality implies that individuals will be more likely to rely on social teachings than on their own independent evaluation of the facts or by independently figuring things out. Docility, then, will often contribute to fitness: a docile individual will not have to touch a hot stove to learn that such behavior is unwise, will not have to try dangerous drugs to determine that they have negative cognitive and behavioral consequences, and will be more likely to study hard in school because her parents tell her it is the way to a successful life. Docility combined with bounded rationality, then, is a *good* thing (at least within certain limits). It makes one more fit. Hence, on Simon's model, docile individuals

¹⁸On Simon's account, docility is what is being selected for at the individual level, not altruism. This is very important to keep in mind. The argument is not that *altruism* increases fitness, but that *docility* does. Altruism can be seen as piggybacking on other internalized norms that do increase the fitness of the individual. This argument can be seen in Gintis, "The Hitchhiker's Guide to Altruism."

will be more likely to have progeny and, hence, move their genes into the next generation.

On Simon's account, altruism becomes a *tax* that is able to be imposed on docile individuals because of their tendency to learn what society wants them to learn combined with bounded rationality, the difficulty or impossibility of evaluating beliefs for all their potential contributions to fitness. Societies that impose this tax, i.e., that instill altruism in their docile members, should be more successful than societies that do not impose such a tax and, hence, should be at an evolutionary advantage.

A society that instilled such behaviors [altruistic] in its docile members would grow more rapidly than one that did not; hence such behaviors would become, by evolution at the social level, a part of the repertory of proper behaviors of successful societies. Societies that did not develop such a repertory would be less fit than those that did, and would ultimately disappear.¹⁹

This assumes, of course, that the altruism being taught has a greater corresponding advantage for other individuals in the society than the costs to fitness of the altruistic individual. But the question remains whether altruism could ultimately survive within these more successful societies if it is costly to the individual reproductive success of the altruist. Simon's answer is that as long as the costs imposed on docile individuals by the altruistic demands of society are lower than the advantages accrued by the skills and knowledge acquired through docility, the proportion of altruists in a society should increase.²⁰

[T]he fitness of altruists will actually exceed the fitness of selfish individuals as long as *d* [the gross increase in offspring due to docility] exceeds *c* [the net cost in offspring of altruistic behavior acquired through docility], that is, as long as the demands for altruism that society imposes on docile individuals are not excessive compared with the advantageous knowledge and skills acquired through docility.²¹

Successful societies will adjust the altruistic demands placed on docile members so as to keep the altruistic costs to fitness far enough below the reproductive benefits of docility in order to ensure that docility will be maintained at functional levels within the society.

Now Simon does assume, as Plantinga points out, that if individuals could discriminate between "proper" or "socially accepted" behavior that is personally beneficial vs. altruistic, they may be inclined to opt for the

¹⁹Simon, "A Mechanism for Social Selection and Successful Altruism," 1667.

²⁰Of course, extreme forms of altruism, from a genetic standpoint, will not be fitnessenhancing. Mother Teresa would be an exemplar of this extreme form of altruism. But presumably societies with at least some Mother Teresas would be better off than societies with none. This would be true to the extent that Mother Teresa's failure to reproduce is compensated at the group level by the increase in reproduction afforded by her contributions to others. And to the extent that altruism is at least indirectly a genetic trait, the number of Mother Teresas in any society should be quite small.

²¹Simon, "A Mechanism for Social Selection and Successful Altruism," 1667.

personally beneficial behavior. But the amount of time and energy required to make such distinctions would offset the benefits of docility. Hence, again docility is not seen to be a defect, a negative trait or an indication of lack of intelligence.²² It is rather a personally and socially beneficial trait. What this basically boils down to is this: docile individuals will be more likely to accept social norms and socially prescribed admonitions to help others over purely self-interested, egoistic behaviors. And as it turns out, docility, even given the corresponding "costs" to fitness involved in the altruistic behaviors that often result from docility, actually increases (on balance) the fitness of both the individual and the society. So in terms of normative claims, it can hardly be said that being perfectly rational, if that is defined as being fully egoistic, is a good thing or the right course to take, or the path one ought to pursue. At least, this is not the case with Simon's model.²³

A significant sticking point between Plantinga and Simon seemingly revolves around the use of the concept "rationality." Plantinga reads Simon as making normative claims when he talks about actors making rational decisions. But Simon is using "rationality" purely descriptively. More specifically, Simon uses "rationality" in the way economists and behavioral scientists typically employ that term in the context of their theories explaining human choices. In this tradition, "rational" behavior is that which maximizes the likelihood of a given goal or outcome at minimal cost. What is considered rational in any given situation is dependent on the actor's preference structure which ordinally ranks the goals or outcomes being pursued and the cost structure perceived to be operative in that situation. Preference structures can change, can differ across individuals, and can be conscious or non-conscious.

On Simon's theory, high on any organism's preference structure (including humans) will be reproduction (expected number of progeny) as this is what is required for an organism to be genetically successful. Those organisms unsuccessful at reproduction were not among our ancestors. Of course, reproduction will not necessarily be consciously high on an individual's preference structure, but many behaviors that ultimately may lead to reproduction are likely to be so—such as the desire to acquire and display objects of high social value (e.g., expensive cars, high-end electronics, etc.).

As stated, it is easy to see how a preference structure that values closeness to God could conflict with a preference structure that values expected number of progeny. What is considered a rational course of action on one preference structure is, in some cases, likely to conflict with what would be a rational course on the other. Simon's theory simply recognizes that a

²²In fact, on Simon's theory, docility should be correlated with intelligence.

²³This is similar to Robert Frank's argument that to behave in a purely self-interested way is often irrational in the long run. This serves as the basis for Frank's argument regarding the importance of emotions in understanding human behavior and their significance for solving various dilemmas confronted by pure rational choice theories. See Frank, *Passion within Reason*.

preference structure that consistently leads to behavior that increases the reproductive fitness of others at *excessive* expense to oneself (i.e., where the net cost in offspring of altruistic behavior *is greater than* the gross increase in offspring due to docility) is unlikely to be a successful evolutionary strategy. As a result, the genes underlying such a preference structure and its corresponding behavioral patterns are unlikely to be passed on to future generations. As a result, such preference structures and their corresponding behavioral patterns should ultimately be eliminated or become quite rare in human groups.

As quoted earlier, Plantinga sees Simon's explanation of altruism as directly opposed to a Christian worldview. But as presented above, Simon's model does not seem to be obviously inconsistent with a Christian worldview, and it actually has much to say for itself from a Christian perspective. In fact, from a Christian perspective wouldn't we expect the world God created to act like Simon's? That is, wouldn't we expect docility, and the corresponding altruism, to be rewarded? On a Christian account, we would expect to see the extreme sort of sacrificial altruism found in people like Mother Teresa, that which is actually detrimental to fitness and progeny, to be relatively rare, and as a result of its social benefits to be highly regarded by others in society. And isn't that what we see? Further, a Christian might well expect egoism to compete with and be complexly intertwined with altruism in a fallen world, i.e., in a world of image-bearers who are estranged from God.

Plantinga recognizes that altruism can be highly rational given certain value commitments. For the Christian, a life of altruism can have the highest of pay-offs—eternal life. And as it turns out, rational choice theory has been applied quite successfully to several problems in the sociology of religion. Rodney Stark has used rational choice theory to offer an explanation of Christian sacrifice at perhaps its most extreme—martyrdom.²⁴ Stark argues that martyrdom promised rewards not only in the world to come, but very often prior to the actual event. Now clearly these rewards were not enough to attract the vast majority of followers, just as the life-commitment of a Mother Teresa is very rare. But they are enough for a select few, and no doubt biology, temperament, personality, and upbringing work together in complex ways to make one open to such avenues of sacrifice.

The Bible also seems to provide us with exemplars that are perfectly consistent with such a rational choice account of behavior, choice, and sacrifice. This is contrary to John Leightner's recent critique of the rational choice model.

Clearly, there are people who profess to be Christians and who try to live a Christian lifestyle, but who do it to maximize their utility by escaping hell or gaining heaven. However, such a motivation is contrary to the teachings of the Bible.²⁵

²⁴Stark, The Rise of Christianity.

²⁵Leightner, "Utility Versus Self-Sacrificing Love," 320.

But is it really contrary to Biblical teaching? Look at Jesus' words in Matthew 6:1–4:²⁶

Be careful to not do your acts of righteousness before men, to be seen by them. If you do, you will have no reward from your Father in heaven. So when you give to the needy, do not announce it with trumpets, as the hypocrites do in the synagogues and on the streets, to be honored by men. I tell you the truth, they have received their reward in full. But when you give to the needy, do not let your left hand know what your right hand is doing, so that your giving may be in secret. Then your Father, who sees what is done in secret, will reward you.

Similarly in Luke 6:30, 31, 35:

Give to everyone who asks you, and if anyone takes what belongs to you, do not demand it back. Do to others as you would have them do to you....But love your enemies, do good to them, and lend to them without expecting to get anything back. Then your reward will be great, and you will be sons of the Most High, because he is kind to the ungrateful and wicked.

We are not suggesting that Jesus is providing a normative theory of human behavior here — that people should help others *because* to do so will result in rewards. That is, Jesus is not suggesting people should do good only because it serves long-range egoistic strategies. But we do think Jesus fully recognizes here the fallen condition of humankind, one result of which is that we *do* tend to act egoistically, and that it is difficult to get people to consistently help others unless there is some pay-off. In the terms of behavioral economics, Jesus here is exhorting us to quit time-discounting and start weighing future rewards and costs more heavily than immediate rewards and costs. This is not much different than parents exhorting their children to save their money for future desires and needs (e.g., education) rather than spend it on some immediate pleasure that will be gone very quickly. And all parents know full well how difficult it is to get children to think this way.

The main point here is that Simon's account does not appear to be in conflict with Christian beliefs in either a superficial or a deep sense. Instead of being seen as a potential defeater of Christian beliefs, it may in fact be in deep concord with a Christian worldview. Given that Simon's approach is used as a placeholder by Plantinga for scientific theorizing that is in direct conflict with Christian beliefs, one may wonder whether the assumed conflict between evolutionary thinking in the behavioral sciences and Christian belief is more apparent than real.

We suggest that any apparent conflict between Christian belief and evolutionary thinking in the social sciences is largely a result of: (1) misunderstanding the scope and terminology of the theory (what is actually being claimed by the theory); or (2) the Christian or the evolutionary theorist importing unnecessary claims into the framework of scientific

²⁶All Biblical references are from the NIV.

investigation, i.e., untestable metatheoretical claims that are irrelevant to the theoretical explanation of the particular issue at hand. The Simonian case would be an example of the former. The second case discussed by Plantinga in *Where the Conflict Really Lies*, Wilson's evolutionary theory of religion, would be an example of the latter.²⁷

The Wilson Case

In *Darwin's Cathedral*, David Sloan Wilson offers an account of the origin and persistence of religious belief and practice from an evolutionary perspective. Like Simon's approach to altruism, this can be seen as a case of puzzle solving. If religion were at best a useless spandrel and at worst dysfunctional or maladaptive, then how would one explain its nearuniversality and persistence across time and culture?²⁸ This question arises in particular given that on the surface the costs of religion appear so steep in terms of time, money, identity, and self-sacrifice.²⁹

Wilson's answer here depends on a version of group selection theory wherein group-level adaptations can increase the fitness of both groups and individuals within those groups.³⁰ In particular, Wilson's focus is on the potential functional utility of religion at the level of the group. Given this focus, the truth-value of any claims being made is secondary to the adaptive properties of the religion in question, i.e., religion may or may not be truth-aimed in any particular case.

[A] fictional belief system can be more motivating than a realistic belief system. . . . [A] fictional belief system can perform the same functions as externally imposed rewards and punishments, often at a much lower cost.³¹

It is true that many religious beliefs are false as literal descriptions of the real world, but this merely forces us to recognize two forms of realism; a factual realism based on literal correspondence and a practical realism based on behavioral adaptedness.³²

However, it appears that factual knowledge is not always sufficient by itself to motivate behavior. At times a symbolic belief system that departs from factual reality fares better.³³

A society with a factually incorrect set of religious beliefs can be as adaptive, if not more so, as a society with factually correct religious beliefs *if* those beliefs serve the group-level functions specified by Wilson.

²⁷Plantinga's focus, and our own, is on Wilson, Darwin's Cathedral.

²⁸A spandrel is a characteristic that arises as a byproduct of the evolution of another trait. Gould, "The Exaptive Excellence of Spandrels as a Term and Prototype."

²⁹Wilson, Darwin's Cathedral, 171.

³⁰The particular mechanisms underlying Wilson's theory are irrelevant to the conflict perceived by Plantinga. Since our concern is with Plantinga's criticism of Wilson our focus will be there as opposed to the adequacy of Wilson's account as a scientific theory.

³¹Wilson, Darwin's Cathedral, 99.

³²Ibid., 228.

³³Ibid., 229.

Plantinga's primary criticism of Wilson's account of religion is that, like Freud's earlier account, it assumes or states that the processes underlying religious belief are not truth-aimed or reality-oriented. Freud sees religious beliefs as primarily aimed at wish-fulfillment, while Wilson sees religious beliefs as primarily aimed at fitness-enhancement. Wilson argues that religious beliefs are adaptive in that they operate to increase the rate of survival of those groups (and those who make up such groups) that hold these beliefs relative to those that do not. Taken as stated, Plantinga takes Wilson's theory to be in direct conflict with Christian belief, since the Christian will believe that those processes underlying belief formation are in fact designed with the end being true belief, not necessarily fitness enhancement.

If Plantinga's account of Wilson's theory is correct, then he is also correct that there is indeed a conflict here. To the extent that an account of the origin of religion, evolutionary or otherwise, assumes or explicitly states that such beliefs are counterfactual, false, or imaginary, then such an account is clearly incompatible with Christian belief. But, if Wilson is claiming what Plantinga suggests, then the problem is not with Wilson's science as such but rather with metatheoretical overreaching on Wilson's account. That is, he sneaks an unnecessary metatheoretical claim into his scientific theory (i.e., a claim that does no explanatory theoretical work). An easy fix is to simply claim that the processes underlying religious beliefs are not *necessarily* truth-aimed. And, in fact, there is good reason to believe that is indeed what Wilson intends.³⁴ On such a claim it is an open question as to whether or not the processes underlying religious belief lead to true beliefs. After all, Wilson's theory is not concerned with the truth-content of the beliefs in question, but rather with the social and adaptive functions they serve for the larger whole. A scientific explanation operating within the constraints of methodological naturalism should be agnostic regarding the truth-value of claims about the supernatural.³⁵

³⁴Ibid., 228.

³⁵Methodological naturalism, on Plantinga's account, is "the idea that in science we should proceed as if the supernatural is not given" (*Where the Conflict Really Lies*, 170). More specifically, methodological naturalism asserts that a proper data set, theory, and evidence base for scientific inquiry will not invoke appeals to supernatural agents, forces, or revelation (*Where the Conflict Really Lies*, 172–173). Methodological naturalism remains agnostic about the existence of supernatural agents, forces, or revelation as well as the truth-value of statements making reference to supernatural beings or forces. It simply restricts appeals to these elements in the doing of science.

Wilson is an advocate of methodological naturalism as evidenced by his statements in various public fora, e.g., "On the Importance of Being a Methodological Naturalist," and "The Future of Religion According to the John Templeton Foundation," In *Darwin's Cathedral*, Wilson characterizes science in the following way:

Science works best when a subject can be resolved into well-framed hypotheses that make different predictions about measurable aspects of the world (1).

And later when discussing design in nature, he states:

Thus if we are studying organisms and if we exclude special creation and alien designers from other planets from consideration, we are left with design as a source of evidence of evolutionary adaptation (71).

And his theory works perfectly well while remaining agnostic about the truth-content of the beliefs in question. All his theory needs to claim is that religious belief systems, and their corresponding practices, have practical utility that enhance the fitness of groups that possess them. That adaptive function is independent of the truth-value of the beliefs in question. And within the scope of a scientific explanation of the origin of religious beliefs, it is irrelevant whether such beliefs are true or false, rational or irrational.

Let us be clear. It is evident from Wilson's text and especially his approach to the Scriptures (even more so, the Gospel narratives) that he does not share Christian beliefs. At one point, relying heavily on the work of Elaine Pagels, he describes the Gospels as follows:

According to Pagels, all four Gospels function as how-to manuals enabling local congregations to function as adaptive units. The instructions are encoded in the historical narratives, which makes all four Gospels suspect as literal history. Narratives designed to motivate behavior are free to omit, distort, and make up facts whenever necessary. The Four Gospels differ from each other, not because they were separated in time, but because they were designed to serve the needs of different Christian churches scattered across the Roman Empire. They are a fossil record of cultural adaptation at an extremely fine scale. Just as upstream and downstream guppy populations evolved to be different in response to the presence and absence of predators, the instructions provided by the four Gospels evolved to be different in response to differents inhabited by the early Christian Congregations.³⁶

No doubt such an analysis of the Gospels appears to be inconsistent with some Christian faith traditions and would fairly be taken as an attack on the very foundations of these traditions. However, it is especially with regard to these claims that one must carefully distinguish what Wilson himself seems to believe about the claims of religion, whether Christian or other, and what strictly speaking his theoretical account warrants, if successful in its terms.

Like the Simon case, however, it is an open question as to whether Wilson is really even making the claims that Plantinga assigns him: that is, that "religion is essentially a means of social control employing or involving fictitious belief"³⁷ and that "religious belief isn't reality oriented."³⁸ In fact, there is good reason to believe that Wilson remains agnostic on the truth-value of religious belief across the board. Wilson makes an important distinction between factual and practical realism. Factual realism in the case of religious beliefs refers to the degree to which the particular beliefs correspond to literal descriptions of the world. Practical realism refers to

Taken together these statements are consistent with Wilson's commitment to methodological naturalism as a means to understanding religion scientifically.

³⁶Pagels, The Origin of Satan, 207–208.

 ³⁷Plantinga, Where the Conflict Really Lies, 138.
³⁸Ibid., 151.

the behavioral adaptiveness of various beliefs—that is, the degree to which a set of beliefs motivates behaviors that are adaptive in the real world. On an evolutionary account of religious belief, practical realism becomes the "gold standard" by which rationality is judged. The factual reality of particular beliefs may indeed become irrelevant. But no judgment is necessary regarding the factual reality of religious beliefs on Wilson's account, although even the Christian would have to acknowledge that not all practically realistic (i.e., functional) religious belief systems correspond to factual reality.

In fact, Wilson's theory is one that would be very compatible with Christian belief if we accept it within its limited scope.³⁹ Wouldn't we expect a world that God created to be structured such that religious belief would in fact pay off in very pragmatic ways, exactly the ways that Wilson suggests: satisfying the basic, fundamental physical and psychological needs of individuals within society? So, like the Simon case, rather than there being conflict between Wilson's theory and Christian belief, there may in fact be deep concord. Wilson's theory ultimately may work better within a Christian worldview than a naturalistic worldview, given that the function of religion according to Wilson would not be surprising from a Christian perspective.

Also important to note here is Wilson's suggestion that science as a unifying system (science here defined as a system devoted exclusively to the pursuit of factual realism) may fail at the level of practical realism in that were we to accept it within all spheres of human activity, society may actually be less adaptive.

[M]uch religious belief does not represent a form of mental weakness but rather the healthy functioning of the biologically and culturally well-adapted human mind. . . . [F]actual realists detached from practical reality were not among our ancestors. It is the person who elevates factual truth above practical truth who must be accused of mental weakness from an evolutionary perspective.⁴⁰

It follows that the values of scientific society do not suffice for the society as a whole. They must be supplemented with other values that place a greater emphasis on practical realism and that hopefully apply to all members of the society as moral equals.⁴¹

Again, there is deep concord here between Wilson's theory and Christian belief. If we take Wilson at face value here, a case could be made that science as a system may operate best within a wider Christian/theistic/religious worldview. Factual realism may serve adaptive functions within a larger system of values and practices that are more geared toward practical realism.

³⁹Plantinga himself acknowledges as much in his discussion of the possibility of a "(Wilson)-minus" (*Where the Conflict Really Lies*, 142–143).

⁴⁰Wilson, *Darwin's Cathedral*, 228. ⁴¹Ibid., 231.

Plantinga's focus on Wilson's evolutionary account of religion is part of a more general critique of evolutionary accounts of religion. But the reason he spends more time with Wilson is that the apparent conflict between Wilson and Christian belief runs deeper than the other accounts addressed by Plantinga. Prior to his focus on Wilson, Plantinga discusses the work of the following thinkers: Rodney Stark, Michael Ruse and E. O. Wilson, Pascal Boyer, Scott Atran, and Stewart Guthrie. In all of these cases, however, Plantinga comes to a conclusion that is similar to the conclusion we ultimately reach in the Wilson case. That is, that the theories these authors propose include unnecessary meta-theoretical add-ons that, when eliminated, erase any apparent conflict between the proposed theory and Christian belief. For example, both Stark and Boyer suggest religion is a spandrel of rational thought that for Stark leads people to attempt to negotiate "nonexistent goods" (e.g., eternal life) from "nonexistent supernatural agents."42 For Boyer, as reported by Plantinga, religion springs from "a family of cognitive phenomena involving 'counterintuitive' beings (beings who act in ways counter to our ordinary categories)"⁴³ such as invisible beings who can act in the world. According to Atran, "religion is (1) a community's costly and hard-to-fake commitment (2) to a counterfactual and counterintuitive world of supernatural agents (3) who master people's existential anxieties such as death and deception."44 But in these three cases Plantinga recognizes that apart from the "gratuitous" counterfactuals, there is nothing in Boyer, Atran, or Stark that is inconsistent with Christian belief.⁴⁵ A similar move is made in regard to E. O. Wilson and Michael Ruse's claim that "ethics is an illusion fobbed off on us by our own genes to get us to cooperate,"46 and that "humans function better if they are deceived by their genes into thinking there is a disinterested objective morality binding upon them, which they should obey."47 Again in this case Plantinga recognizes that simply removing the theoretically unnecessary claims that "ethics is an illusion" and that "belief in an objective morality is a deception" leaves the theory essentially intact and removes any apparent conflict between the theory and Christian belief.

The case of Stewart Guthrie hinges on the validity of the process by which we come to form beliefs about agency. Guthrie sees religious beliefs

⁴²This characterization of Stark (found on 137–138 and 142 of *Where the Conflict Really Lies*) comes directly from Wilson's summary of Stark found in *Darwin's Cathedral*, 48. It is important to note here that in the work cited by Wilson (Stark, "Micro Foundations of Religion"), Stark never characterizes the supernatural agents referenced in religious belief systems as "non-existent" or "imaginary."

⁴³Boyer, *Religion Explained*.

⁴⁴Atran, In Gods We Trust, 4, quoted in Plantinga, Where the Conflict Really Lies, 139.

⁴⁵Plantinga, Where the Conflict Really Lies, 140.

⁴⁶Ruse and Wilson, "The Evolution of Ethics," 310, quoted in Plantinga, *Where the Conflict Really Lies*, 134.

⁴⁷Ruse and Wilson, "Moral Philosophy as Applied Science," 179, quoted in Plantinga, Where the Conflict Really Lies, 134.

as the result of a hypersensitive agency detection device (aka HADD).⁴⁸ Because of its hypersensitivity it will deliver many false positives, meaning we are prone to mistakenly attribute agency to objects or entities in our environments that are not in fact agents. The assumption is that false positives are less costly than false negatives, e.g., failing to attribute agency to an object that could potentially do us great harm, such as a very hungry tiger. But as Plantinga points out, this theory does not discredit belief in supernatural agents or render such beliefs irrational just because they were induced by HADD. Since HADD delivers true beliefs as well as false, there is no reason to believe that any particular belief (including the belief in a supernatural agent) is false simply because it was produced by HADD. This distinguishes Guthrie from Wilson, in that Plantinga reads Wilson as claiming that the belief producing mechanisms involved in religious beliefs are not aimed at the production of true belief.

Wilson then appears to be in deeper conflict with Christian belief than any of the other cases Plantinga addresses. But what we have shown is that in the first place it is not clearly the case that Wilson makes the strong claim Plantinga attributes to him. For example, Wilson does claim that "many religious beliefs are false as literal descriptions of the real world,"⁴⁹ but he also recognizes that many non-religious belief systems also "distort the facts of the real world."⁵⁰ But even if we attribute the strong claim to Wilson, any apparent conflict with Christian belief is erased with a slight adjustment to the alleged claim, i.e., that the belief-producing mechanisms involved in religious belief are not *necessarily* truth-aimed. Such an adjustment leaves the theory's explanatory power intact and removes an unnecessary metatheoretical claim, i.e., a claim that lies beyond the reach of science operating within the constraints of methodological naturalism.

Simonian Science and the Christian: Moving Forward

While we have argued that Simon's theory of altruism and Wilson's evolutionary account of religion are not in conflict, superficially or otherwise, with Christian belief, what does Plantinga suggest we do if there were real (yet superficial) conflict between science and genuine tenets of Christian faith? Does he suggest that the Christian should ignore good science and hold the faith beliefs to be untouchable? Should she hold that claims in science that do conflict with Christian faith must simply be denied as false if in conflict with known truths of faith? Sensibly, Plantinga does not recommend either option. One option would be to set up a parallel scientific enterprise where the commitments of Christian faith play a role as part of the so-called evidence base. This has been defended by Plantinga in a prior set of papers.⁵¹ He argued that Christians might pursue what he

⁴⁸Guthrie, Faces in the Clouds.

⁴⁹Wilson, Darwin's Cathedral, 228.

⁵⁰Ibid.

⁵¹Plantinga, "Methodological Naturalism, Part 1" and "Methodological Naturalism, Part 2."

called "Augustinian" science as an alternative to the prevailing approach to science committed to methodological naturalism. In his recent book he has not pursued this course, but also has not simply disavowed it as a non-starter.⁵² The strategy he adopts is similar in certain respects, but retreats to a safer place by not attempting to claim the mantle of science. He relies on the work he has done to defend the right of Christians to claim knowledge with respect to Christian faith and that such knowledge provides a wider evidence base than the truncated evidence set of methodologically naturalistic science. A Christian may discern that while the claims of Simonian science might appear quite plausible given the narrower evidence set of science limited by a commitment to methodological naturalism (MN), they may well not be plausible with respect to her wider evidence set. In such cases, Simonian science does not provide a defeater for Christian faith.

So, is it a good idea for Christians to pursue science under the guidelines of MN? Plantinga's prior answer was: sometimes yes, sometimes no. To get clearer on what this discussion might involve, let's look at how he understands MN. "According to MN, the data model of a proper scientific theory will not invoke God or other supernatural agents or employ what one knows or thinks one knows by way of revelation."53 A theory as well cannot include reference to the supernatural in its actual postulations or appeal to what one knows or believes via revelation. Nor will such science include in the evidence base beliefs entailed by the existence of supernatural beings and propositions about them or by revelation, e.g., the doctrines of the Incarnation or Atonement. "Hence, rejecting, for example, Herbert Simon's theory of altruism because it is massively improbable with respect to a Christian evidence base would presumably not be proper science-not at least, if proper science involves methodological naturalism."54 Rather than question MN as a proper limit on science, Plantinga adopts a more defensible, and in many ways guite reasonable strategy of arguing that the evidence base available to a practicing scientist in her tool of arguments within science does not equal the Christian's evidence base.⁵⁵ This change in strategy takes more seriously his philosophical defense of warranted Christian belief insofar as he sees no need to invoke science to gain epistemic credibility.

In Where the Conflict Really Lies, Plantinga has taken a step in the right direction to dampen the fears of conflict between science and faith. Unfortunately, the way he invokes Simonian science still suggests that we

⁵²Plantinga, Where the Conflict Really Lies, 190.

⁵³Ibid., 172.

⁵⁴Ibid., 173.

⁵⁵The Christian may very well claim here that Simon's account is highly limiting as an understanding of altruism and other moral behaviors. After all, the Christian would want to give credence to the influence of the Holy Spirit as a motivating force in a person's decision to help and care for others. We would agree. But as long as Simon's account remains within its limited scope there is no conflict with Christian belief.

should be expecting conflict in a class of contemporary science, namely evolutionary psychology, where such is arguably not the case. Finally, he raises the question of whether Christians should simply respond to claims of genuine conflict by judging the plausibility of such claims to be low according to their wider evidence base. His answer to this is "no, not necessarily" but the explanation is somewhat frustrating. He goes on at some length to explain how such a negotiation might go in his discussion of "Faith and Reason"⁵⁶ and the "Reduction Test."⁵⁷ But at the end of the day it amounts to this: beliefs of faith may be revised, but it would take a lot of evidence to warrant revision and, if such beliefs are held as basic (warranted straightaway), this counterevidence would need to be very significant. Again it is helpful to remind us that good science (i.e., science that has gathered sufficient evidence, has had a record of explanatory success, and has genuinely garnered the basis for claiming it has the truth even about what goes beyond observation) can help us revise some of our faith beliefs.

Another issue here that deserves attention is the extent to which metatheoretical claims in general and Christian beliefs in particular come into direct contact with scientific theorizing, at least if scientists remain within the confines of MN in their work as scientists. We suggest it is doubtful that Christian metatheory plays a role in scientific theorizing. For example, Plantinga suggests Simonian science, even if successful science, would not be a defeater for:

(B) Mother Teresa was perfectly rational in behaving in that altruistic manner. $^{\rm 58}$

According to Plantinga, the reason Simonian science would not be a defeater for (B) is that Simonian science is unlikely to be true given the other propositions in the Christian's arsenal (evidence base) such as that "human beings have been created by God and created in his image" etc.⁵⁹ We argue Simonian science is not a defeater for (B) because this claim is not, in fact, in conflict with Simon's theory. But Plantinga's claim also flounders on the vagueness of what it means to be created in God's image. Without some fairly well spelled out theory/theology of "image bearing," it is not clear at all that Simonian science, even on Plantinga's understanding, is in conflict with Christian beliefs regarding *imago Dei*, especially if one also takes the fall seriously. Simonian science (operating within the constraints of MN) is unlikely to be a defeater of any truly significant Christian belief because those Christian beliefs are stated at such a level of abstraction that they never clearly come into contact with the particular claims of Simonian science.

⁵⁶Plantinga, Where the Conflict Really Lies, 178.

⁵⁷Ibid., 186.

⁵⁸Ibid., 186.

⁵⁹Ibid., 187.

That Christian control beliefs operate so weakly in the Simon case, a case that several Christian thinkers see as in direct conflict with Christian beliefs, may in part explain why there are no strong research programs coming out of the Christian tradition, as Wolterstorff calls for in *Reason within the Bounds of Religion*. It may simply be the case that Christian metatheoretical assumptions are too abstract and indeterminate to operate strongly at the level of theory construction and evaluation. The claim here is not that metatheories have nothing to say about theory construction and evaluation. But perhaps that relationship is not as direct and restrictive as seems to be suggested by Plantinga and others.

Plantinga is on the right track to argue that the evolutionary claims of Simon and David Sloan Wilson are, at most, in superficial conflict with Christian faith. And he is right to argue that the partisans of such areas of science, such as evolutionary explanations of religion, can sometimes fall prey to the temptation of overreaching interpretation. However, given the long history of conflict, it seems wise to restrict the "conflict" call to very clear cases. In this instance, Plantinga's claim about evolutionary psychology fails to meet that standard.⁶⁰

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