THE PROBLEM OF EVIL: A SOLUTION FROM SCIENCE

by Patricia A. Williams

Abstract. In this essay, I attempt to solve the problem of the existence of evil in a world created by an omniscient, omnibenevolent, omnipotent God. I conclude that evil exists because God wanted to create moral creatures. Because choice is necessary for morality, God created creatures with enormous capacities for choice—and therefore enormous capacities for evil. Material creatures are subject to pain and death because, for such creatures, moral choices are deeply serious. The laws that underlie the material world and from which material life arises are such that, from their workings out on a planet that can support life, natural evils happen.

Keywords: cosmos; evil; God; morality; Nazis; problem of evil; sociobiology; theodicy.

In this paper, I attempt to solve the problem of evil by using contemporary science to suggest that evil exists necessarily as a part of this universe. I begin by clarifying the problem and adumbrating various traditional solutions to it. Because evil is primarily a deep-seated problem of human social relationships, I turn to sociobiology and primatology to uncover its ancestry. Next, I look at a classic case of human evil, Nazism in Germany, to ask what capacities enabled human beings to murder in half a decade some twelve million of their own kind in cold blood. From the preceding information and arguments, I conclude that God created this world in order to have creatures for whom moral decisions are central and that this purpose explains the presence of evil in it, not only the presence of moral evil but the presence of natural evil as well.

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[*Zygon*, vol. 36, no. 3 (September 2001).]
 ISSN 0591-2385

The Problem of Evil

The problem of evil arises in all monotheistic religions. It is largely a logical and conceptual problem. If there is one God who is omniscient, omnipotent, omnibenevolent, and who created the world, it seems logical that there would be no evil in the creation. But when we look around, we find pain and death, the two concomitants of human life traditionally considered the greatest evils. Sometimes pain and death occur because of natural causes such as earthquakes, but more often they are due to what have come to be called moral causes, wrong moral choices made by human beings. Any thorough solution to the problem of evil must treat both kinds of causes.

One way to solve the problem with simple logic is to say that the conception of God as an omnipotent, omniscient, omnibenevolent creator must be incorrect. If God is not omnipotent, perhaps God was not powerful enough to get the job of creation done right; if not omniscient, God did not have enough knowledge to foresee how much evil there would be; if not omnibenevolent, God did not care about the evil; if God is not the creator, then some lesser god messed things up. Traditionally, however, monotheists have not been willing to give up the concept of God as an omniscient, omnibenevolent, and omnipotent creator. Instead, they have tried to save the concept and yet explain the presence of evil in the world. Such efforts go by the name *theodicy*.

There are four traditional philosophical theodicies as well as one based on biblical theology. The first philosophical theodicy suggests that this world contains evil because evil builds character. There is no doubt considerable truth to this claim, and the existence of some evil can be explained by it. However, too frequently people are morally, physically, and/or psychologically destroyed by the evil they encounter, so this cannot explain all of the evil that occurs. In the second theodicy, God brings good out of evil. Not only does this not explain why there is evil in the first place, but it is not apparent that God does bring good out of evil; frequently it seems more apparent that God does not. A third theodicy claims that what appears to be evil is not evil. This, too, is not apparent, and if it is true, then the apparent existence of evil requires explanation. The fourth theodicy holds that people have free will; their wrong choices cause evil. But this explanation does not account for natural evils, and there seems as well to be just too much evil for individual wrong choices to account for it. Why does human life seem so inextricably enmeshed in evil?

The traditional Christian theological answer is based on Genesis as interpreted by Saints Paul and Augustine and is a form of the free-will solution. God created the world good and created human beings good, too. But God created them free, and the very first human beings disobeyed God. Their disobedience brought death into the world, and it brought

pain as well. Their disobedience also infected their progeny and the physical world. Now human beings have a nature that is "fallen" and live in a "fallen" cosmos. So, evil is the fault of the first human pair, and all of their progeny and their cosmos participate in it.

The traditional theological answer has disintegrated under the blows of modern science. It is now a truism in biology that acquired characteristics, such as a tendency to disobey or the large muscles of the prize fighter, characteristics developed in parents due to their behavior, are not inherited. Moreover, the cosmos would not have been affected. And the theory of evolution makes stories about first parents untenable, for evolution is a statistical and populational phenomenon. An explanation different in kind from that offered in Genesis as interpreted by Saints Paul and Augustine is required.

In this paper, I assume that the science we now have, both biological and cosmological, provides models of nature that a rational person living in the early twenty-first century would accept, that is, would consider to be the most rational alternatives among available models of the material world. Because I am trying to solve the problem of evil, I also assume that God exists, a creator God who is omniscient, omnipotent, and omnibenevolent. Because the problem of evil is largely the problem of moral evil, a human psychological and social problem, I begin the solution with a look at the roots of the problem in human ancestors.

The Mammalian/Primate Roots

In 1964, W. D. Hamilton published two papers on insects that became the foundations of the science of sociobiology, the study of animal social behavior based on genetics. In brief, he showed that the strongly social nature of female social insects toward each other occurs because sisters are genetically very much alike. Three-fourths of their genes on average are exact copies of the genes of their sisters. The males, on the other hand, are genetically quite different from their siblings. Only one-fourth of their genes are shared on average. As a result, they are markedly unsocial toward their siblings. (The genetic figures are based on those genes that differentiate individuals from each other, not on the entire genome.)

Soon, biologists began to examine mammalian social behavior with genetic relatedness in mind. E. O. Wilson's *Sociobiology: The New Synthesis* (1975) summarized all the sociobiological material in a massive and widely read book. Unlike the insects, mammalian offspring are related to each other and to their parents by one-half of their genes. As degree of relatedness decreases, genetic relatedness falls exponentially, for example, first cousins are only one-eighth related (only one-eighth of their genes are the same). For practical behavioral purposes, this means that parents care more for their own offspring than they do for distant relatives or nonrelatives.

This also means that social mammals form their societies from clans of relatives. Sociality is counterbalanced by the need of the individual to survive as an individual and to garner resources for reproductive purposes. (See Wilson 1975 for a more detailed explanation.)

The degree of sociality in different species of mammals varies. This variation has many causes, but a major one is their different diets. Where resources must be garnered by the group acting together, as with many carnivores (e.g., lions, wolves), the animals are highly social (Wilson 1975, 499–502). Where resources can be garnered by an animal alone, as with the omnivorous bear, the animals are largely solitary except during mating season (pp. 502–3).

Among the primates, humanity's nearest living relatives, almost all species are social. Nonetheless, the social structure of each species differs from that of other species. For example, baboons form large harems lorded over by one male, who is not reluctant to use force against his females to keep his harem together (Smuts 1987, 112–18). In contrast, chimpanzees usually live in small, sexually mixed, peaceful groups, and sex is shared around to a considerable extent (pp. 167–70). Yet chimpanzee troops, too, have a dominant male—sometimes a dominant pair of males—and the skills of the leader are an important factor in the welfare of the troop. The members of the troop form loose and shifting hierarchies in both the male and the female lines. Kinship matters in these hierarchical arrangements, especially for the females, for female offspring tend to stay with their mother's troop, whereas males migrate out to find mates (de Waal 1989).

Most of primate life is social life. Within groups, there is common play, dispute and the settlement of dispute, friendship and rivalry, leader and led (Smuts 1987, 306–17). Striving to rise in the social hierarchy occurs (de Waal 1996, 89–132). Tools are used, such as termite fishing sticks and leaves to carry things or to clean the body. Tool use and certain gestures unique to each group constitute a rudimentary culture which is transmitted across generations (Smuts 1987, 464–65). Against outsiders, there is sometimes activity resembling war on a small group scale (Goodall 1990, 98–111). It is arguable that chimpanzees have a moral sense, that is, some sense of how they ought to interact socially (Harnden-Warwick 1997, 29–40). In short, much is in place in these close relatives of human beings that is strikingly "human" (de Waal 1996, 209–18).

Yet, for all of their moments of brutality, other primates do little harm in comparison with that done by human beings. Human beings have tortured and killed billions of their fellows. To examine the capacities that have enabled us to do so, I turn to a classic case of human evil, the destruction of the Jews and other "undesirables" by Nazi Germany in the 1940s. First I examine the case of an individual Nazi convicted after the war of mass murder, and then I look at the ideology that lay behind the killing.

Evil among the Nazis

Franz Stangl was commandant consecutively of two extermination camps in Poland, Sobibor and Treblinka (unless otherwise noted, all information is from Sereny 1974). After the war he fled to Brazil and was later captured, tried, and convicted of the murder of 900,000 people. Like many of those who engaged in mass murder, he was an ordinary man, neither a sadist, a fanatic, nor an ideologue. (See Browning 1992 for an account of just how ordinary the Nazi murderers were.) He began his working life in a dusty factory, then later joined the police for the sake of his health. He joined the Nazi Party apparently (the matter is not completely clear) for social reasons rather than ideological ones. His police position put him in charge of security for the T-4 euthanasia program. He was not involved in the killing itself.

He did not volunteer to run an extermination camp. He was ordered there. When he realized the purpose of the camp, he was horrified and considered resigning. He did not resign, however. He stayed on for three reasons: he feared that the Nazis would kill him if he did not carry out his orders, he feared they would kill his wife and children, and he was ambitious, enjoying his high place in the Nazi hierarchy. These fears and this ambition are natural in the fullest sense of the word. They are the basic mammalian/primate drives for survival, reproduction, and resources. (High standing in a hierarchy gives an animal, and more strongly a human being, great command of resources, both sexual and material.)

Stangl also had an ability that human beings seem to share with chimpanzees, and that is the ability to distance oneself from others, to dehumanize (dechimpize) them, to consider them a different and lesser species. Jane Goodall tells the story of chimpanzee "war." The victims were treated with the gestures and manners chimpanzees display toward the animal species that are their typical prey rather than with those normally used toward their fellow chimpanzees (Goodall 1990, 106).

When Stangl and his wife were in Brazil, they were on a train that passed a holding pen at a cattle slaughtering operation. Stangl looked out, stared at the cattle, and thought, "This reminds me of Poland; that's just how the people looked—trustingly—just before they went into the tins" (in Sereny 1974, 344). He had so distanced himself from his victims that he saw them as similar to cattle. Albert Speer, Hitler's minister of armaments, had a similar contempt for the slaves he imported from the occupied Slavic lands to work in the armaments industry. He never considered that he and they might have anything in common (Sereny 1995).

Stangl had many other capacities. For example, he was capable of cooperating with others on large projects, and he loved efficiency. As a result, he ran the death camps well, that is, dead bodies were not left lying around, prisoners were not usually treated sadistically, and new arrivals were killed

quickly. Although some other animals cooperate in small kinship packs during brief hunts, the ability to cooperate with large numbers of non-kin in a common cause and to do so efficiently over months and years are uniquely human capacities, capacities not shared with other animal species.

Stangl and his men were able to kill so efficiently because of the creative inventiveness of generations of human beings and the cultural transmission of the accumulated knowledge. (Information on the Nazis is from Dawidowicz 1975 and Proctor 1988.) The science of chemistry was well developed, making Zyklon B gas available for exterminations. Railways were everywhere so that "undesirables" could be shipped to the extermination camps from all over Europe. The concept of the factory was well understood, lending itself readily to industrialized murder. Such a degree of inventiveness, such an elaborate culture, so much cultural transmission—these also are uniquely human.

Part of Nazi ideology involved the development and maintenance of hierarchical relationships and the establishment of a great leader whom people were to follow unhesitatingly. Dispositions toward leadership and hierarchy have their roots in humans' mammalian and primate inheritance. Without them, social animals could not live well-ordered social lives or make effective group decisions.

Partly, it was a sense of hierarchy that led the Nazis to exterminate the Jews and Gypsies and enslave the Slavic peoples. But they also followed an ideology based on a largely symbolic construction of kin and clan (race, nation) stemming from ancient religious beliefs (Carmichael 1992) and supported by the latest scientific and reasoned theories taught in some of the best universities in Europe and America. The formation of ideologies is possible because human beings have the ability, unique among animals, to abstract, to reason, and to think symbolically, abilities without which we would hardly be human.

It follows that the Nazis should not be characterized as "brutes." Because they exercised fully their unique human capacities, they were relentlessly human. Their unique human capacities enabled them to murder some six million Jews and six million others in concentration and extermination camps and bring about the deaths of more millions in a worldwide war.

And yet, the ability to abstract, to think symbolically, to reason, to be creative, to acquire and pass on culture, to form hierarchies, and to love kin and clan are also the abilities that enable human beings to create civilization, literature, music, science, technology, mathematics, art, democracy, and much, much more. The ability to abstract and to think symbolically are particularly important levers by which human beings raise themselves above the narrow ties of kin and clan. Using them, both the tribal gatherers of nuts envisioned by Peter Singer (1981, 93–94) and the sophisticated philosophers of John Stuart Mill can see that "the interests of all are to be regarded equally" (Mill [1863] 1987, 45). Having seen that

this position accords with reason, people have helped themselves develop such equality in their own lives by creating symbolic kin. Such kinship symbols lie behind the concept of nation, behind the idea that all people are siblings, behind the vision of humanity as a family, and behind adoptees and in-laws being labeled as brothers and sisters. Religion employs symbols of kinship as well, helping people love God, who is considered the parent of the human family.

In contrast, the ability to dehumanize others appears to be a vice without any concomitant virtue and is, as well, a key to the Nazi atrocities (Browning 1992, 162). However, this ability, too, is a necessary part of the human heritage, necessary in two respects. First, in their relationships with other animals, human beings are both predator and prey. Early human beings were beset by animal predators against whom they had to defend themselves. Those who were empathetic with hungry predators did not survive to reproduce. Furthermore, human beings are omnivorous; they eat meat. To kill and eat, they must have the capacity to treat other animals unempathetically as prey. These capacities can be extended to other human beings if propaganda dehumanizes them, as Nazi propaganda did and as war propaganda from whichever side tends to do. That is, war propagandists use the unique human ability to think symbolically and abstractly (stereotypically) to get people to think of their enemies as less than human, as predators that must be killed or as prey that must die.

Second, the human child's long period of dependency, a period that allows for the enculturation without which we would not be human, means that human parents must have especially strong attachments to their children. The obverse of this strong and special attachment may be an enhanced ability to feel detached from others, an ability quickly to see enemies when the family is threatened or seems to be threatened. The Nazis' strong emphasis on the family and on its vulnerability to genetic degeneration through miscegenation would have reinforced the sense of threat and made Jews appear to be predators on the family, an impression that the Nazis deliberately fostered by referring to Jews as parasites and cancers on the nation and by banning marriage and sexual relations with them. The ability to dehumanize others comes with our animal heritage as predator and as prey and our hominoid heritage as loving and protective parents of vulnerable children, each heritage being enhanced by our uniquely human ability to think abstractly and symbolically.

If God is omnipotent and omniscient, God did not make a mistake in designing an evolving cosmos that produced human beings. God created purposefully. The human beings who came to be in God's universe have enormous capacities, which give them a previously unknown number and range of choices, a number and range that become ever more extensive as human history unfolds. (Compare the hunter-gatherer with the agriculturalist with the industrialist with a member of the information society.)

Indeed, so great are human choices that much of human life is constructed in order to limit choices to make them manageable. We habituate and ritualize so that we do not have to decide anew every morning whether to eat breakfast, to drive to work, or to go to work at all. Any given culture functions as a choice limiter as well as a choice provider.

Morality as Theodicy

Charles Darwin, who understood so much about evolution, explained what happens when creatures acquire capacities that give them so many choices: "any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well developed, or nearly as well developed, as in man" ([1871] 1981, 71–72). The choice-enhancing capacities (Darwin's "intellectual powers") are morally neutral capacities. The Nazis used them for murder and war. Mahatma Gandhi and Martin Luther King, Jr., used them for peace and reconciliation. Joseph Stalin used them to establish a totalitarian state. Thomas Jefferson used them to create a democracy. They provide us with the ability to make many such choices, and making such choices and explaining them to others leads to the development of conscience (Singer 1981, 87–124).

Making and explaining choices leads to the development of conscience because so many of the choices are moral ones. Even when the choices do not appear to be moral, they often have a moral component. For example, what career to pursue may appear to be a purely economic matter, but if the career is as a lawyer for a tobacco company, there may be moral taint, and if it is as a hit-person for the Mafia, then there is more than taint. On the other hand, to be in one of the helping professions carries moral virtue. Even the major modern economic decisions of buying a house or a car have moral overtones. If the house wastes resources or the car pollutes, or if either purchase requires so much of a family's income that other welfare-enhancing choices are seriously diminished, then the choice is morally tainted.

In summary, people have enormous capacities that are morally neutral. Yet, as soon as these capacities evolve, conscience evolves, morality evolves, and the making of moral choices evolves in the cosmos. Thus it appears that God the creator allowed and/or provided for such capacities to evolve in people because God wanted creatures who make moral choices. In other words, God created people—and perhaps the universe (Corey 1993)—in order to create moral creatures. From a human point of view, this world is designed as a staging area, a theater in which people must make moral choices.

The view that humanity's extraordinary capacities exist so that moral choice becomes a possibility in the cosmos is partly captured by the traditional theodicies, with one exception. The exception is the argument that

evil is only apparent. If this is a world designed for moral choice, then the choice must be real, and it would not be real if evil were not real. This does not imply that evil has a separate ontological status such as that captured by personifying evil as Satan. Evil is real, but it is a necessary part of a humanity whose capacities make human beings moral beings.

It seems reasonable that a benevolent God would try to mitigate the evil. To do this, God might bring good out of evil. This might be done in various ways, and one way would be to have the encounter with evil build strong moral character. This certainly happens. Moreover, if the world is designed as a place for moral life, then character building, developing the virtues that make good moral choices consistently possible, would be part of the plan.

God might also mitigate the evil by helping people make the right choices. The theological word for this is *grace*, a gift often deeply hidden; the biblical phrase is "a still, small voice" (1 Kings 19:12b). The reason grace is hidden and the voice still and small is that the hiddenness and stillness of God in human experience preserve human freedom to make choices. If God appeared more strongly, people's psyches would be overwhelmed, and people would do God's bidding by compulsion, not freely.

However, people would not be compelled even by the most outstanding human example, for that example would be human like themselves. It is possible that God has given humanity exemplary moral models to follow. If divinity itself were fully incarnate, human, yet hidden, then this example, too, would preserve human freedom of choice.

According to the view presented in this paper, people do make free choices, and their free choices do result in evil. However, the reason that free choice exists is not because it is a good in itself but because it is a necessity for moral creatures, and moral creatures are what God decided to evolve.

The two classic evils are death and pain. Death comes because we are material creatures, subject to all the laws of physics, chemistry, and biology. We die natural deaths partly because evolution has little use for creatures who outlive their reproductive abilities, and therefore it did not build everlasting repair mechanisms into organisms (Goldsmith 1991, 87–90). Repair mechanisms are necessary not only because the flexibility that comes with carbon, the basis of life, leads to error but ultimately because physical systems are subject to the second law of thermodynamics, the law that closed physical systems become increasingly disordered over time. Yet, the second law turns out to be necessary for life. Without it, the information that makes life possible could not accumulate, and the predictability that makes life livable would not exist (Corey 1993, 101). Death seems to be a necessary concomitant of our materiality. A benevolent God might redeem humanity from this necessary material death by creating life eternal for humanity beyond materiality as we know it. This seems to be what

Saint Paul had in mind when he commented, "We will not all die, but we will all be changed" (1 Corinthians 15:51).

The second law and the four fundamental forces—gravity, electromagnetism, and the weak and strong nuclear forces—enabled the universe, Earth, life, and humanity to come to be. Natural evil, the evil caused by earthquake, fire, and flood, occurs because planet Earth is subject to these laws. Yet, planet Earth also supports life, and it would not be able to support life if, under these laws, it had evolved much differently. It had to be just about this distance from the Sun for photosynthesis and for temperatures adequate for life (Corey 1993, 75). It needed volcanoes to help form its crust (Asimov 1984, 169) and to start an atmosphere (Smoluchowski 1983, 51–52). Volcanoes require mobile tectonic plates, and their movement spawns earthquakes (Smoluchowski 1983, 60). Earth rotates, and this rotation causes masses of air to turn clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere, producing hurricanes and tornadoes (Asimov 1984, 155–56). But if the Earth did not rotate, one side would freeze, the other cook, as on the moon, and there would be no life. Fires burn forests and homes, killing the creatures in them. With less oxygen in the atmosphere, fires would not burn (Corey 1993, 79), but with less oxygen, animals could not breathe. As with moral life, where material life exists, evil does not have a separate ontological status. Rather, natural evil is a concomitant of natural good.

The information gleaned by modern science provides an excellent argument for the existence of God. The detail, the synergy, the coincidences, the orderliness that science has uncovered in the cosmos strongly suggest the existence of intelligent design (Davies 1988, 203), and not only intelligent design, but design for life (Davies 1988, 163), and if for life, then perhaps for humanity, for the God powerful and intelligent enough to design a life-promoting universe could make one productive of human life.

Pain, the other classic evil, is necessary for life forms that move around. For a tree, pain would be unnecessary, indeed, an unmitigated evil, for a tree cannot move out of the way when the logger or the forest fire comes. However, for human beings, pain is a saver of lives. Human beings who are being cut or burned experience pain and, being able to move away, withdraw. Pain is especially useful for creatures who also have memories, for they remember their first cutting or burning, how painful it was and how long to heal, and they do not go near blade or fire again. Moreover, diseases that result in loss of the capacity for pain have proved very dangerous, for pain-free people injure themselves repeatedly. Often they do not know that they are injured, for there is no pain to tell them so, and they might not treat the burn or staunch the blood. Pain evolved because animals that experienced pain outsurvived and outreproduced those that did not. Pain is a necessary part of a universe that includes motile, material, mortal beings.

If the material world contains pain and death, and God created it, perhaps God is not benevolent. A world lacking pain and death would be a happier place. Moreover, not only would it be a happier place, but if its denizens were social creatures with capacities like those of human beings, it would not lack morality, for morality is necessary for social life in creatures with many choices. And yet, such creatures would lack moral seriousness, for they would not meet the sorts of serious moral conflicts faced by mortal creatures who feel pain. Moral choices become very serious indeed when they involve death rather than dishonor, torture rather than disloyalty, prolonged suffering rather than suicide. The existence of pain and death is one of the best arguments available that God did not intend to create a hedonistic paradise but rather chose a world where morality takes center stage. In turn, the centrality of morality argues that people really do have free choice, for without free choice, there would be no morality at all (Williams 1993, 234–35).

To say that evil is necessary seems to imply that God is not omnipotent but rather constrained with respect to choices. For example, God's choice to create material creatures necessitates that they will be mortal. However, this is not the only way to construe the matter. The better construction is that the laws governing the material world are secondary laws created by God. They do not govern God; God governs them. God is free of their constraints. God's creativity is analogous to that of an artist. Artists choose their medium and its laws, then use the very constraints imposed by the medium and its laws to be creative. For example, an author may compose poetry or novels. Poetry has its own set of rules, and rules within rules. Novels have rules unlike those of poetry. Among novels, detective novels have different rules than historical ones. But all the rules are made by human beings, and following them produces the distinctive poem or novel the author wishes.

God is like an author. God makes the rules and the rules within the rules. Which rules God makes depends on the desired creation. For this world, the main rules seem to be the second law of thermodynamics and the four fundamental forces. There might have been other worlds with other rules. But these rules turn out to be the ones for creating a world inhabited by creatures for whom morality is to be a central and serious matter.

Conclusion

I have attempted here to solve the problem of the existence of evil in a world created by an omniscient, omnibenevolent, omnipotent God. I have argued that evil exists because God wanted to create moral creatures. Because choice is necessary for morality, God created creatures with enormous capacities for choice—and therefore enormous capacities for evil. In

doing so, God also created material creatures, subject to pain and death. For such creatures, moral choices are deeply serious. The laws that underlie the material world and from which material life arises are such that, from their workings out on a planet that can support material life, natural evils happen.

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