



## DANIEL DENNETT

“EVOLUTION IS AN EXPLORATION OF THE POSSIBLE.  
IT IS A BLIND, PURPOSELESS EXPLORATION,  
BUT IT’S A VERY GOOD ONE.”

Claims that Daniel Dennett rejects:

*Miraculous creationism can account for unexplained scientific phenomena*

*Evolutionary theory and ethics are mutually exclusive*

*Competition necessarily trumps cooperation in nature*

*There are no rules on Mars*

*Philosophers are idiots*

**F**irst, to set the record straight: despite accusations to the contrary, Daniel Dennett does not believe that religious people should be put in animal cages. He also doesn’t want to tell your children that Santa Claus is a lie. And it’s probably okay if we keep “In God We Trust” on our coins. He’s just willing to ask in public what a lot of other people have wondered in private: How has religious rhetoric come to dominate our public sphere?

Dennett is the author of several books, including *Darwin’s Dangerous Idea* and *Freedom Evolves*, and is the Director of the Center for Cognitive Studies at Tufts University. He takes big ideas and weaves them together into enormous ones. *Evolutionary theory, consciousness, religion, artificial intelligence, free will, the future of human morality*—each of these subjects and more have been subjected to Dennett’s scrutiny. He

traces a path through them all, creating a unified philosophy that is both steeped in science and persistently human. His rhetoric and analysis are rigorous but always engaging, and his ideas are firmly grounded in wildebeests, shopping malls, and the NBA.

The following conversation was conducted over the phone, from Boston to Berkeley, in the last fleeting moments before Dennett’s dinner called.

—Eli Horowitz

**THE BELIEVER:** A few months back, you wrote an op-ed piece in the *New York Times* urging atheists and agnostics to come out of the closet and openly proclaim their beliefs, in order to create a more balanced communication between politicians and the public. Do you think religion plays an important role in the current government? On one hand we see, for example, what was happening in Alabama with the Ten Com-

mandments in the courthouse. I have this sticker I got in the mail, from something called the Presidential Prayer Team—

DD: [Laughs]

BLVR: And it's got this picture of George W. Bush standing in front of the flag with his head bowed in prayer and to either side are these ghostly figures of Abraham Lincoln and George Washington...

DD: Yeah?

BLVR: ... with their hands on his shoulders.

DD: Wow.

BLVR: It's pretty amazing. It's not a governmental organization. I think it's mostly set up to sell these commemorative coins.

DD: Goodness gracious. The Presidential Prayer Team...

BLVR: But then on the other hand, as you've observed, even though Congress and the whole government has some Christian trappings, it generally operates on a secular-humanist basis. How significant is the actual role of religion in the government now?

DD: I think it's significant as a distorter. I think that yes, by and large, secular thinking actually figures out what policies we're going to follow. I don't think that bishops or preachers are behind the scenes determining how people vote or anything of that sort. I don't believe religion is powerful in that sense. But I think religion is powerful as a sort of distorting medium for everything that goes on in American political life. And I think that although this is largely benign, there are times when it's really important to clear the air and remind ourselves that this is a secular state. I'm not in favor of expunging "In God We Trust" from all the coins...

BLVR: You don't think that has an insidious effect?

DD: Well, yes. I think all of this contributes. I think there are lots of people right now—they're either ignorant or under a misapprehension—who think that America isn't a secular state. They think it's a Christian state.

BLVR: Certainly some arguments seem to presuppose that.

DD: I think that it's time to firmly and gently and politely inform people that it's not the case. It's a secular state and it's a good thing it is.

BLVR: How does this spring out of your views about an individual's relationship to religion? You've generated some controversy with your thoughts on the future role of religion. Some people have exaggerated that, I think, into more of an antagonistic approach...

DD: They certainly have. It's quite an interesting case. "Dennett thinks religious people should be put in cages." I don't know if you're aware of that.

BLVR: [Laughs] Yeah. Cages versus zoos.

DD: The last chapter of *Darwin's Dangerous Idea* has a rather lengthy discussion of the delicate issue of how we should deal with religious fanaticism, while maintaining religious freedom. Some religious practices are just too dangerous to tolerate, and need to be outlawed. Lions are beautiful, but if anybody wants to bring them into town, they will have to be caged. This passage, and another, commenting on the sad fate of religious practices kept alive as anthropological museum exhibits—the tourists flocking to watch whirling dervishes or tribal dances—were opportunistically ripped out of context by some who wanted to discredit me, and were cited as proof that I wanted to throw creationists into prison! I didn't realize how widespread it was until Michael Rea wrote a piece in response to my *New York Times* editorial, making that bizarre charge. When I looked on the web I found that he wasn't alone. He seemed to be picking up a theme that's been pushed around by various religious folks for I don't know how long. Maybe ever since I published

*Darwin's Dangerous Idea*. But it's really in itself an interesting symptom of just how a heartfelt allegiance to a religious position can cloud the minds of otherwise intelligent people. I found Michael Rea's piece simply shocking. That sort of misrepresentation gets you in real trouble in the scientific community and in other academic communities. The fact that it was religiously motivated doesn't excuse it at all. Not for nothing did I call my response piece, "Shame on Rea." I think he should be ashamed. I still haven't gotten an apology from him.

BLVR: They're still not entirely innocuous, your ideas. They would certainly affect religion as we know it, the way people conceptualize religion.

DD: Certainly. What I recommend is that religion—all religion, from the most highly sophisticated and urbane and mild, doctrinally low suburban Protestantism to the most robust form of fundamentalism across all the major religions—should be a proper object of scientific study. It's a very important and influential phenomenon in the world. Why should it be off-limits? It shouldn't be. Now, can it be studied without offending, without destroying, without imposing improper probes on people? I think that's a very interesting question to which we don't yet know the answer. If the answer is that we mustn't study religion, that it is somehow off-limits, it's out of bounds to rational inquiry—that itself is extraordinarily unsettling and worrying. That would be a very worrying conclusion. I don't believe it myself. I think that it is time to ask ourselves, calmly, what we know about religion in general, how it evolved, why it evolved, what it's good for, what it's bad for. And those people who can't accept that their faith is going to come under this kind of scrutiny have got a serious problem. I'm sure that this will occasion some anguish and some soul-searching, and it should.

BLVR: But that's a description of the scientist's or the philosopher's relationship with religion. What about religious individuals' relationships with their own religion? Is that affected?

DD: Well, of course. Individuals have many different relationships to their particular religious affiliations. Let's just remind ourselves of some of the categories. Some people study a religion quite thoroughly and make a conscious, adult decision to join that religion, and then study its tenets very carefully. That is an extremely rare type. For most others, their religion is simply what they were born into. They grew up, they went to Sunday School or Hebrew School or whatever, they were in effect *raised* in a particular religious culture, which they may know well or they may not know well. They may love it, they may hate it. Those are very different relationships. There are many people who love the tradition and don't believe a word of it, but are very reluctant—and for good reason—to admit that they don't believe it. To admit that to themselves or to their family and friends is a matter of great social delicacy. We don't go around telling other people's children that there is no Santa Claus. That's intrusive. That's offensive. We mustn't do that. And so we also don't insist that people be candid about their religious beliefs with their friends and family.

BLVR: Richard Dawkins got some attention a while ago for saying that people who don't believe in evolution are "ignorant, insane, or stupid." Do you feel that that also applies, or will apply, to people who believe in God?

DD: No, I don't think that it's anywhere near as clear-



*The North American Bubonic Lion*

cut as that. Let's take what Dawkins says. Suppose we exchange "evolution" and say, "People who don't believe the world is round are ignorant, insane, or stupid." I think that's right.

I think that the case for evolution is about as good as the case that the earth is round. Just as good, really. So yeah, I think that's right. It's not a politician's way of putting it, but yes—it may not be your fault that you don't know how good the argument and evidence are for evolution, but you might still be ignorant. Maybe people have hidden it from you. It doesn't mean you're stupid and it doesn't mean you're insane, it just means you've been sheltered.

BLVR: But regarding the existence of God, you don't feel the argument is as strong?

DD: No. Of course not.

BLVR: Is it the same category of argument? Or is that subject out of the bounds of debate?

DD: No, of course it isn't. One of the reasons that the argument isn't as strong is that there are so many concepts of God around. There aren't that many concepts of evolution; it's pretty well defined. What some people mean by "God" is so different from what other people mean by "God" that you would be foolish in the extreme to make any claims about whether the existence of God was proven, provable, knowable, not knowable—it's a swamp of varying meanings and conceptions and one can't make any generalizations about it beyond that.

BLVR: So someone could reasonably have belief in God—there's not any evidence to prove it, but it's still a plausible position?

DD: It all depends on what you mean by "God." If you think of God as an anthropomorphic, thunderbolt-throwing, armed and legged human-shaped being, then I think the belief in that kind of God is approximately as benighted as the belief in Superman or the Easter Bunny.

BLVR: What about the God that's proposed by intelligent-design theorists? Does that offend you only because you think it's unnecessary?

DD: Well, they'll have to be clearer about what kind of a God they mean. If they mean an intelligent designer that is something with a mind, something like an engineer or an artist or a poet or a composer—I mean, those are our intelligent designers, right? Musicians and composers and engineers and architects—these are the people who design things and who are intelligent. The intelligent-design hypothesis says that there is good reason to believe that there is such a being, an intelligent designer. I think that there isn't any good evidence for that at all. There could be, but there isn't. But it's not a stupid belief. It's not an insane belief. It's a belief that there's no good reason to hold. But there are some reasons that masquerade as good reasons and it's pretty hard to tell that they're not.

BLVR: I think the intelligent-design theory is largely a reaction to the sense that nature is just too complicated to have happened randomly. There are some easy responses to this—it's natural selection, not just random, and it happened over a very long period of time. But it's still a powerful objection. Couldn't you make mathematical projections of the number of, in effect, coincidences that would have to happen, and their likelihood, and thus the amount of time necessary for a particular organism to evolve?

DD: There's no doubt that that would be a really good way of showing that there had to be something aside from natural selection.

BLVR: Or that there didn't have to be.

DD: Or that there didn't. These are timing arguments, arguments that find some objective way of measuring how much design work has been done.

I like the idea of design work. I talk about it incessantly throughout *Darwin's Dangerous Idea*. There was a lot of R & D that had to be done. We do have some sense of how much R & D there has been and how

valuable R & D is and how it doesn't just *happen*. It *does* require an explanation. It's expensive. So the idea that one could marshal an argument based on the amount of R & D that would have to be done and the presumed fact that there isn't enough time or hasn't been enough exploration of lineages to do it is a good idea. These are perfectly legitimate places to look for good arguments against natural selection. It just happens that when you do, what you find, again and again, is cranes, not skyhooks. In *Darwin's Dangerous Idea* I characterize the skeptics' search for something in the biosphere that could not have evolved by gradual evolutionary *lifting* in design space, but instead had to be, in effect, miraculously created, as *seeking for a skyhook*. What skyhook-seekers have often found, in spite of themselves, is cranes: nonmiraculous enhancements of natural selection, phenomena that speed up or render more powerful the basic process of natural selection. Genetic engineering, for instance, is obviously a crane—not a miracle, but a natural phenomenon that has recently evolved thanks to the science of *Homo sapiens*. But there are many other cranes that have arisen over the billions of years of evolution. People often misjudge the power of natural selection, concentrating on the basic, slow process; natural selection has a few more tricks up its sleeves. It has created these local speed-ups again and again and again.

BLVR: And so the numbers work out that natural selection alone is a sufficient explanation?

DD: The numbers work out just fine. That's why I like this sort of dialectic. You have a skeptic who says, "I just don't think there's been enough time for this dumb process to do its work. I'm going to try and characterize a you-can't-get-there-from-here phenomenon." You know, a skyhook. And they try. And the process of getting clearer about just what would be involved leads to the discovery of another crane.

BLVR: At the end of *Darwin's Dangerous Idea* you reject a lot of the implications of evolutionary theory for ethics—

DD: Well, I reject a lot of the ones that people who have a rather misguided sense of the importance of evolution have put forward.

BLVR: What sort of implications, if any, do you think there should be?

DD: I talk about this quite a bit in my more recent book, *Freedom Evolves*. I think first of all you have to remind yourself that evolution doesn't have a purpose, it doesn't have a goal, and so any ultimate purposes that we endorse and have allegiance to are not just going to be given to us by evolution. Everything that we value, or could value, is a fruit of the tree of life. But the endorsement doesn't come from evolution. Just because something evolves doesn't mean that it's morally good. It may be morally pernicious. Many things that have evolved *are* morally pernicious. That said, it is very interesting to see the conditions under which cooperation evolves—the conditions under which competition beats out cooperation, and the conditions under which cooperation triumphs over selfish competition.

BLVR: Can this be used to learn about effective ways to structure our own ethics?

DD: Well, in fact, yes. Evolution is an exploration of the possible. It is a blind, purposeless exploration, but it's a very good one. And it is really heartening to see how evolution has discovered the conditions under which cooperation is possible and stable—what it takes to maintain it and what it takes to subvert it. Right now I'm looking out my screen porch at all the trees around the edge of my field. And they're all in competition with each other; they've all grown as high as they can and they've all pushed their branches out into the field as much as they can to get as much sunlight as possible. What is evolutionarily unenforceable is that they should just stay small and share the sunlight equally. They are not equipped to accept that communitarian message.

There is a perspective, then, in which forests are a sort of moral outrage. This is unbridled selfishness at work. It is exactly the same kind of unbridled selfishness

you see along strip malls where the signs are bigger and bigger and everyone's competing for the consumer's buck. That same all-consuming competitiveness we can find right in my beautiful forest.

But there are conditions under which cooperation reigns. It's very interesting to see what they are. They're not entirely heartening, because cooperation does particularly well when the threat is dire. When the group is under tremendous pressure and attack from outside enemies, that's when people are good at cooperating, and that's when cells are good at cooperating too. When they have no choice that isn't suicidal.

We see this in human groups of all kinds: nations, political parties, religious organizations, basketball teams. Many people lament, for good reason, the attitude of the stars of the NBA today and for that matter Major League Baseball, and to a lesser extent football, that they're all just selfish. Team play, the whole concept of team play, is hard to sustain with all these free agents running around. And if you look at that situation closely you realize that team play really is fostered when teams survive as teams. When your only way to make a living in the sport is to be a team member and you can't switch teams.

BLVR: We hear the story again and again of these championship teams where a scrappy, awful player suddenly pops up and becomes the most valuable player at the key moment.

DD: Well, there's a rich lore of impromptu theorizing by sportswriters and columnists and theoreticians of one stamp or another as to what are the conditions when true team spirit can thrive in a sport. One has to bear in mind that one of the side effects of that sort of team spirit is often a sort of vicious xenophobia and hatred of the Other. One only has to go to a pep rally to see the ugly side of team spirit. So these are phenomena that are illuminated by an evolutionary perspective. We see similar phenomena, phenomena with similar dynamics and similar conditions of flourishing and failing, from the level of cells on up.

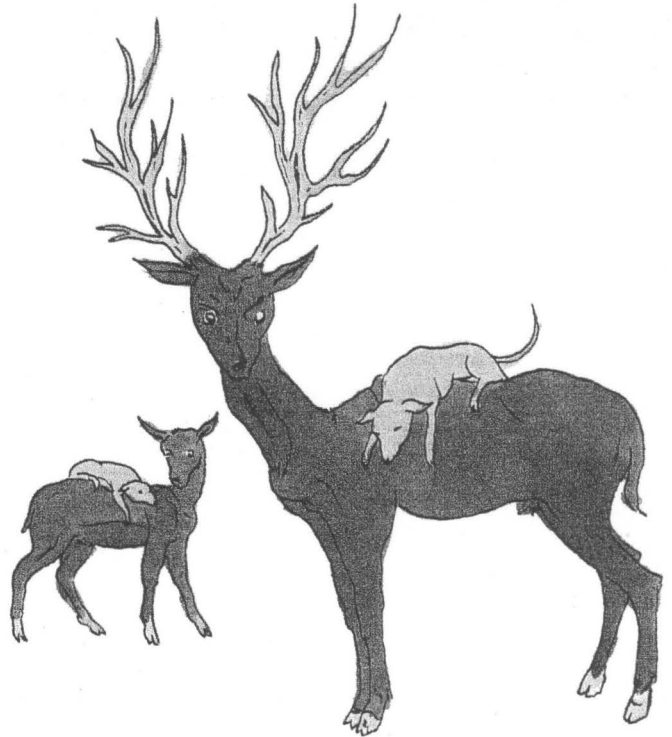
BLVR: Is there a reverse lesson? I don't know if this will

actually take us anywhere, but I'm curious if there's a reverse example that would be along the lines of either Colin Turnbull's study of the Ik tribe, or a losing basketball team, where they're in more trouble than ever but they don't band together. Does that have an evolutionary analogy, in which the dire circumstances degrade the teamwork?

DD: Well, it's not clear whether the dire circumstances degrade the teamwork or the circumstances are dire because this is a group that was already, for some other reason, incapable of rising to the sort of teamwork that might have helped them. Good question. I'll have to think about that, whether there's any clear parallel. I don't know.

BLVR: I seem to always end up rooting for losing teams, so I'm looking for some sort of consolation.

DD: [Laughs] I'll work on it.



*The Dog-Owning Brown Deer of Winnipeg*

BLVR: A lot of your work involves skewering people who are clinging onto beliefs that aren't supported by simple explanation and simple evidence—

DD: That's what a philosopher should do.

BLVR: Of course. But when you reject the sociobiological account of ethics, as put forth by Edward Wilson and others, it seems like they could accuse you of playing the opposite role, of resisting simple explanations. They are basically equating "ought" with "is," and I don't think it's because of a fallacy, but rather just because they think that "ought" is another word for "is"—that "ought" is kind of a cultural artifact and that morality doesn't have its own external authority.

DD: I think that scientists often aspire to answer the questions that philosophers have been working on for millennia, and they often underestimate how hard these questions are. So even brilliant scientists, when they say, "Okay, now it's time to roll up my sleeves and do some ethics, do some philosophy," they almost invariably miss a few strokes and end up embarrassing themselves with some of the mistakes they make. I mean, philosophers are not idiots. We're very good at finding the mistakes that are very tempting to very smart people and showing that they are mistakes nevertheless. So if you don't know the history of philosophy well, you're almost certainly going to be tempted to make the mistakes that tempted the great philosophers. I often find that part of my role as a philosopher dealing with scientists is to say, "Hey, it's not that simple. Philosophers actually have something to teach you here." And often they recognize that. Ed Wilson is a good example.

BLVR: But it seems that you do hold ethics as some true and nonmaterialist phenomenon.

DD: It has nothing to do with anything nonmaterial. Let me try to put it in a way that I think is perhaps what you're trying to get at. I am a certain sort of ultra-mild Platonist. I think, for instance, that arithmetic is true eternally and it doesn't depend on the material of it. It's not immaterial—it's just abstract. There are lots of

abstract truths. Mathematics is abstract truth. You can be a good materialist and believe that mathematical truth is not just generalizations about how matter clumps. And I think that ethics is the same kind of thing. I don't think there's anything surprising about that. I think that how to play winning chess is also entirely abstract, has nothing to do with matter. There are the canons of good chess strategy and these are *a priori* truths. Just what philosophers love to talk about: *a priori* truths. They are abstract, but they are only of interest because people actually play chess. Now, ethical truths, if there are any, are *a priori* truths.

BLVR: And it doesn't worry you, the scientific side of you?

DD: No more than the fact that arithmetic is *a priori* truth.

BLVR: Do you think these sociobiological accounts can provide fairly plausible explanations for our ethical beliefs?

DD: Let's take it apart a little bit. Let's consider: did we evolve to know arithmetic? Yeah, we did. There's actually some very interesting work on the evolution of arithmetical sense, number sense. Some good books by Stanislas Dehaene and others. It has been a hot topic in biology.

BLVR: With natural selection favoring organisms that actually understood arithmetic?

DD: Sure. With natural selection designing our capacities for judging quantities, and even a sort of counting. You know, it's very important if you're a wildebeest to know the difference between two lions and three lions. And what we know is that animals have evolved lots of sophisticated know-how that is very abstract. Geometry, cost-benefit analysis...

BLVR: Figuring out which lion to run away from first is probably a pretty complicated calculation.

DD: Right. Think about migrating birds and their navigational capacities. There is a lot of know-how that is in them, designed into them even though they can't reflect on it. They don't *know* that they know this stuff—they just have the benefits of all this know-how. Now, a lot of this know-how is abstract, a *priori* truth. Four is twice two. So evolution tracks these *a priori* truths just as much as it tracks more variable, material features of the world.

BLVR: I guess what I'm getting at is this: you rejected the intelligent-design theory, not because it is impossible, but because there is no real reason to accept it, because it is not necessary. Say these sociobiologists can account for most of our ethical beliefs—

DD: Account for the fact that we believe them or account for the fact that we're right to believe them?

BLVR: Just that we believe them.

DD: Because those are very different questions.

BLVR: Of course. And they couldn't even start to prove that we're *right* to believe them. They couldn't even use that word, I think.

DD: Right.

BLVR: But say they can account for just why we believe that it's bad to kill people—it erodes the public confidence and so on. If they can tell a story like that, why does it still make sense to postulate this new category of *a priori* beliefs, this set of moral qualities, if we don't need that as an explanation?

DD: Because there are well-founded, well-formed curiosities that are not addressed by those questions. Let me make it dramatic. Suppose this [sociobiological account] explains the evolution of these creeds on Earth. What about on some other planet? Which of these would you have expected to evolve on any planet where there's intelligent life? Now if they say, "We're clueless—we don't have any idea about it," then you tell

them that there is a standpoint from which you can get at this. We know darn well that on any other planet that evolves intelligent life they're going to have the same arithmetic that we do. They may not have base-ten arithmetic and they sure aren't going to write the number "5" with the curly part and the straight parts the way we do. Those are accidents. But they're going to have arithmetic. They are going to know that  $2 + 2 = 4$ . Now the question is: Are their societies going to have the same ethics that we do? Are they going to have the same precepts? It's the same kind of question, just as good a question. We want to know why. Is it just historical accident on this planet?

BLVR: So it's almost a Kantian categorical imperative?

DD: Sure. Kant was asking the question about the *a priori* necessary conditions, for intellect, for intelligence, for consciousness, for knowledge. And we can also talk about ethics in the same way.

BLVR: And so these would be *a priori* truths, I guess, that emerge through the evolutionary process?

DD: Yes.

BLVR: Hmm. Neat. That opens a whole new can of worms, or maybe not worms, but... anyway, I know you have to go to dinner. One last thing: would you like to take this opportunity to further your search for information on the French robot dog?

DD: Sure. Maybe somebody will know something about it. I found it in an antique shop in Paris. It was made in France in the 1950s, so I have named it Tati, in honor of the French filmmaker Jacques Tati. I don't know who made it, or why, and would be pleased to receive any information about its provenance. [To see a photo, go to <http://ase.tufts.edu/cogstud/~ddennett.htm> and scroll to the bottom.]

It is not the robotic dog from Dr. Who, by the way. Many people have thought so, but Lalla Ward, who played opposite it on Dr. Who, insists that it isn't even close. ★