

Interview

Daniel Dennett

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DANIEL CLEMENT DENNETT (1942, Boston, MA) is an American philosopher and cognitive scientist. His research work mostly concerns the philosophy of mind, the philosophy of science and the philosophy of biology. He has been one of W. V. O. Quine's students at Harvard University, where he graduated in philosophy in 1963. In 1965, he achieved his Ph.D in philosophy at the University of Oxford under Gilbert Ryle's supervision. In his academic career, he has taught at the universities of Irvine, Harvard, Pittsburgh, Oxford, and the École Normale Supérieure in Paris. Since 1971, he is professor of philosophy at Tufts University, where he co-directs with Ray Jackendoff the Center for Cognitive Studies. Among his books, *Content and Consciousness* (1969), *Brainstorms* (1978), *The Mind's I* (with D. R. Hofstadter, 1981), *Elbow Room* (1984), *The Intentional Stance* (1987), *Consciousness Explained* (1991), *Darwin's Dangerous Idea* (1995), *Kinds of Minds* (1996), *Brainchildren* (1998), *Freedom Evolves* (2003), *Sweet Dreams* (2005), *Breaking the Spell* (2006), and *Science and Religion: Are They Compatible?* (2011).

1. Professor Dennett, thank you very much for accepting this interview with *Humana.Mente*. Consistent with the topic of this issue, I would like to discuss your *Freedom Evolves* (2003). Can you explain to our readers what urged you to write a book about the problem of free will?

Let me start by saying that we should anchor the concept of free will to the fact that people think that it is important. I can define free will in such a way that we do not have it but this is little interesting. Instead, there is a variety of concepts of free will worth wanting that we are talking about. What is important about free will is that it gives us the chance to be moral agents. Chimpanzees do not have minds that can appreciate what murder is. Accordingly, if a chimpanzee

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kills a person, this is not murder. Similarly, we do not hold children responsible or retarded people, in that we do not think they have free will in an important sense. Instead, it is normal adults who are morally competent. It is to this capacity to be moral agents, therefore, to be moved by reasons, to be able to preserve and protect our mental autonomy through time – as when we discover, for instance, that other agents are intending to usurp our autonomy or to manipulate us – that the concept of free will in which I am interested is connected.

2. A long philosophical tradition denies that we are free because of the supposed truth of determinism. Indeed, many philosophers have argued, we cannot say that we are free to act if what is happening in a second is already defined by the current situation of the world. How can you develop a concept of free will that is important to moral agency while at the same time it does not oppose determinism?

The key concept, herein, is our ability for *anticipation*. We are free to act because we are able to look at the world that we are in and anticipate likely futures, evaluate them, and then avoid the ones that we evaluate as less valuable. It is this capacity that makes us moral agents. At the same time, this capacity does not define a variety of free will outside of the deterministic natural order. A simple case of that is if I throw a rock at your head, and you duck, avoiding getting hit with the rock. Thanks to the deterministic path of light rays, being regular and predictable, the light that bounced off the rock into your eyes allowed you to anticipate the trajectory of that rock with great accuracy. Thus, determinism is actually our friend, because it provides regularities in the world that we can exploit. It is this mega-capacity to secure the good and to avoid the bad that is the essence of free will. You want to have your will cause you to move in the best directions by your assessment of the world's situation. You have desires and intentions you would like to fulfil. Perception causes you to acquire facts about the world that are relevant to those desires. When all goes well, those facts about the world cause your body to make the choices that will most probably satisfy your deepest intentions. That is what free will worth wanting is: the capacity to be guided to effective choices.

3. Your concept of free will is thus preferentially related to the complexity of the relation between human agency and the environment. We act freely because we are able to cope with unexpected changes in the environment. However, the concept of free will is traditionally connected to the perception of our own agency. We retain us to be free because we feel free when making our choices. Do you think that this perception of free will is an illusion?

No, that is not an illusion or, if it is, it is like the user's illusion on our computer. When using our computer, we have the sense that we can open and close files, and we can move them around, drag and drop, and so forth. The actual processes involved behind the scenes in the computer are more complicated than the icons suggest: the interface between the user and the computer is a valuable – because vivid and memorable – simplification of the actual events. Our brain has a lot of user illusions as well – which is a good thing. They help us coping with all the complexities of our brain by oversimplifying the vision of what is going on in it. According to this user illusion, we are not wrong when we see our future as open. In fact, our future is open in a very important sense. I will take a deliberately simplified example. If you play chess against your computer, your computer has the perspective that the future is open. Indeed, it has the sense that it can choose any of the legal moves and that so can you. If that presumption is built into the control of the software, then your computer – although it is an entirely deterministic system – has the perspective that the future is open. But it has a perspective of openness because that perspective is required for making choices. Similarly, our perception to be able to act freely is related to our perception that the future is open – that is, that we perceive ourselves as capable of choosing between different real alternatives. This does not mean that the future actually is open, but it is important to make our choices.

4. Thus, your compatibilist view acknowledges that determinism is true while at the same time this does not affect the reality of free will. However, many have claimed that free will is opposed to the truth of determinism. For instance, many neuroscientists nowadays reject human free will based on Libet's (1985) findings, which correlate neural events and the phenomenological experience to decide to act. According to them, Libet

demonstrated that our brain decides to act before we do. What do you think about that?

I think that the interpretation of Libet's findings as demonstrating that specific individuated neural events are the real causes of our decisions to act is the huge artefact of a mistaken conception of consciousness. Libet's work is a perfect paradigm of how you get in trouble if you are what I called a "Cartesian materialist". If you think of consciousness as being something that happens in one place of the brain, to which all contents must be moved to be experienced, then you make a big mistake. But look at how you put the questions: "the brain decides to act before we do". Who is this *we*? Where is it? If you are thinking of the *we* as being somehow resident in one place or another somewhere in the brain, and you are thinking that the decision is already made before it arrives there, you are just making a huge mistake. When I wrote *Consciousness Explained* (1991), I was specifically trying to expose this error. I used Libet's work as my chief target. Amazingly, I underestimated how potent the seductiveness of Cartesian materialism is. People just will not give it up. They all agree when I say that Cartesian materialism is a bad idea, and then two minutes later they are right back using conceptualizations which would only make sense if they are supposing the Cartesian theory. However, if you do not permit yourself the mistake of the Cartesian theory, you cannot formulate Libet's results in a way that looks problematical at all.

5. The interpretation of Libet's experiments is significant not only to the very issue of free will. Indeed, many have claimed that, if our free will does not determine our behaviour, then our social concepts should be changed. For instance, if free will is an illusion, then a retributivist conception of justice, according to which criminals are judged and punished based on the harm they have caused, is not acceptable anymore. They would not be morally responsible for the harm they had caused.

That is what Greene and Cohen (2004) say. There are two things to say about this. First, what Greene and Cohen claim is subordinated to the condition "if free will is an illusion", which is not the case. But, in any way, one of the main points I was trying to make is that the relationship between a mild gentle human retributivism and what we know about the brain is intact. I resist vigorously the idea that we should abandon all elements of retributivism from

our view of the law, and move to a sort of pure medicalization idea. Because, if we did that, we would no longer be able to make the distinctions we need if we are to apply the law, not just to punish the guilty criminal but also to enforce the signing of contracts, for instance. You need the concept of a morally competent agent for that.

6. By “pure medicalization idea” you perhaps mean a consequentialist view of justice, according to which judgement and punishment are inflicted according to the social benefit of their consequences. Why, according to you, staying away from consequentialism is so important?

Because it does not permit the protection of freedoms. Consequentialism treats law violation as a sickness; and, if you’re a sick person, you go to an institution to cure you. In an authoritarian state, when people say they have broken the law because the law is unjust, they get the reply: “Well, your brain is not sufficiently mature for that, and we need to cure you by appropriate punishment with good social consequences”. Well, we want to be able to restore ourselves to freedom by taking the punishment because we broke the law. If you get a car speeding you would pay a ticket, you do not want to be sent to the speeding hospital for a month. And of course if you really get rid of retributivism and if your model is a medicalization model, then one cannot distinguish the morally competent, adult agents from those who are not able to make promises, sign contracts, and so forth.

7. If consequentialism cannot grant the conception of human being as morally responsible agents, how do you think that a retributivist conception of justice may do better? After all, even retributivism has its flaws. “An eye for an eye, a tooth for a tooth” is not what we may call a valuable saying for a modern conception of justice. In some cases people are not morally responsible for what they do (e.g., children, mentally disturbed people), thereby the punishment nor addresses an intention to break the law neither has a positive effect for the society. Considering these cases, how can a retributivist conception of justice be preferable to consequentialism?

There’s a process that protects us all from the excesses of retributivism. We legislate past laws, then, in order to keep respect of the law, we acknowledge very exclusive conditions not to apply it. This creates the opportunity for

people to try finding loophole, trying to exploit the exclusive conditions we have introduced – everybody always tries to exploit any law, whether it's a tax law, or any kind of law. Thus, we have to come back legislating, and to do something to prevent people from exploiting the special exclusive conditions we previously introduced. This creates an “arms race” between exemptions and exploitation of exemptions that is the source of stability in the law. I would like to take a very simple case: how old do you have to be in Italy to have a driving licence?

18 years old.

Ok, it is 16 in the United States. Is one of them right and one of them wrong? No, and maybe you can make the case that you have to be a politician, not a scientist, to lower the age to 16 in Italy – or to raise the age to 18 in the United States. In any case, once we have made that decision – for instance, we decided, that you need to be 18 to drive a car – we fix a legal threshold. If you are not 18, we do not look never more at how mature you are, we do not care if you are a genius, or the most literate person in the world, if you are not 18, then you cannot drive yet. On the other side, if you are 19, then you can be pretty idiotic, you can be pretty dangerous, and you still have the right to drive. Then we adjust that in turn. Indeed, we say: “Maybe, if you are caught during this or that you are going to lose your licence for a while, or maybe you cannot drive at night, or a truck, and so forth”. All of this is done to provide some bright lines as the law says where Nature has not done big bright lines. It is not that when you wake up on your eighteenth birthday your brain changes so we can expect from neuroscience another source of evidence about where to draw these bright lines (e.g., about the right age to drive). There is nothing to say exactly. At what age people should be allowed to drive is a political issue, and we want to keep it that way. We want to be able to rely on the world's future, and do not allow anyone to deprive our liberty or our opportunities to set these edges because somebody has decided that we are not competent anymore.

8. Resuming, you are suggesting that we are always judged in front of the law according to a standard of competence which is not fixed by Nature. Accordingly, we do not want to delegate our capacity to fix these standards. Any reasonable view about justice should keep retributivism – i.e., the principle that we are judged according to what we did – but also the

principle that the standards defining the moral competence according to which we are judged may change. Is this correct?

Exactly. That is why I think that a mild form of “revisable” retributivism is preferable.

9. We long discussed the incompatibilist position of the eliminative materialist. Considering another incompatibilist position, the libertarian, who claims that we do have free will not just because we are able to protect our mental economy but also because we are able to do that *by ourselves* – that is, without being caused by anything external to us – may object that your definition of free will is very weak. What would you reply?

Yes, my concept of free will would seem like a weak one to the libertarians. To act freely, they claim, you have to act independently from external causes, that is, indeterministically. However, what they have not shown is why indeterminism would make it any better. I have argued that, if what I do is completely random, then I am no more responsible for that than if it is determined: deterministic chaos essentially is indistinguishable from randomness. I think it should be an embarrassment to the libertarians that the very models we have of randomness is throwing the dice, or flipping a coin. Indeed, those models are chaotic and important, but they are not random. Instead, I argue, those models are useful, and they indicate a way to construct a concept of free will that is relevant to the definition of us as moral agents. Indeed, the unpredictability of chaotic events – such as flipping a coin, or something like that – is the kind of unpredictability needed to decouple from features of the world, hence to act freely. We show to have this kind of unpredictability in our behaviour, but actually even animals employ. The rabbit that runs from the fox takes a very chaotic trajectory. The butterfly moves very chaotically. These are evolutionary adaptations that make these animals harder to catch. That kind of randomness, that kind of freedom is all around us in Nature. It is not the kind of free will the libertarian would like to have for the human species. It is not free will, either. But it is all we need in order to construct a concept of free will that is relevant to the definition of us as moral agents.

10. You seems suggesting that free will is not construed as a sharp-bounded concept. This poses the issue of how free will is obtained. From an evolutionary standpoint, should we say that free will has been gradually construed during the history of life on Earth?

Definitively yes. From an evolutionary standpoint, the fact that only one species currently has free will is only an empirical fact. Maybe in the future there will be more. The important thing is that free will is a new phenomenon in the biosphere. That means that free will has nothing to do with the physics, indeed the physics has not changed since the origin of the Earth. What has changed is biology. There has been an explosion of evitability in our world. The earliest forms of life could not produce any significant behaviour to chance their destiny. Consider again my examples of the rabbit or of the butterfly that move very chaotically. Those are all examples of avoiding activities. However, our nervous systems have more estimable competences than animals and even our ancestors did not have. We can avoid all kinds of things, and of course we can even avoid avoiding, and we can avoid avoiding avoiding, and so forth. We have all recursive capacities to avoid things that we can anticipate.

11. The absence of sharp boundaries to the concept of free will also poses an issue with respect to the ontogenesis. Should we say that children are already born with the capacity to act freely, or is it acquired during child development?

I think both. Even small babies have the fundamental capacity to address the world and to make simple choices – e.g., whether to lift this or that hand up. However, at the beginning of their lives, they have not yet coordinated their sense of action, and, with this respect, they still do not act freely. This is something which requires more time. We know they go through a period when they are simply unable to avert their eyes from a stimulus, and the capacity to move your attention away from one object to another is actually something that requires maturity. Until you do not have that, I think you do not have much of the bases for free will.

12. Herein, I see an important issue for your proposal. It seems to me that you believe that language is the most important ability we need to detach from contextual stimulation, thereby even to become free agents.

Yes, language certainly is very important. In order for an agent to be moved by reasons as concept, it is very important for her to have language.

13. Now, I would like to understand the reasons why you think that language is really important. Let me now just quote your *Kinds of Minds* (1996, pp. 146-147): «Of all the mind tools we acquire in the course of furnishing our brains from the stockpiles of culture, none are more important, of course, than words – first spoken, then written. Words make us more intelligent by making cognition easier, in the same way (many times multiplied) that beacons and landmarks make navigation in the world easier for simple creatures». You are suggesting that language scaffolds though in that word learning increases our cognitive capacities. This proposal alone raises some perplexity to me. Word learning does not seem a fundamental ability to language development. In fact, even animals can learn words by associative processes. Instead, other features of language really might make the difference to the development of our cognitive abilities. For instance, we know that children exploit syntactic hints in their word learning processes...

Well, animals do not really learn words. They learn sounds that have associations, and that is a big difference. I think Terrence Deacon has important things to say about this in his book of *The Symbolic Species* (Deacon 1997), and also my colleagues Ray Jackendoff in his book *Foundations of Language* (Jackendoff 2002). What I really like about Ray's recent work is that syntax is still important but it is no longer the driving machine of language acquisition. Syntax is a feature of words, but words are a sort of semi-autonomous entities, which appropriately move from one language to another. I have been recently thinking of words as a sort of Java Applet. On your laptop, you have a Java Virtual Machine, which permits people to write Java applets who will run beautifully on your laptop no matter what the architecture of the laptop is. Similarly, you have a sort of EVM, an English Virtual Machine. That permits me – without I have to know how your brain works – to talk to you and to know that the words I am telling to you play roughly the role that I intended to play because you have the EVM system for realising those words when they come in. This is the reason why words are not sounds. Sounds are just means that can be pronounced; however, these means convey informational structures, they are like software to the brain.

14. If syntax is secondary relevant to develop language, what is distinctive of words that can alone provide the complexity of language?

I think that words open up the explosion of cultural transmission because they are the key to the digitalization of language. When I talk about digitalization, I am thinking to the fact that, for instance, when you download something from the web, there are lots of tiny variations in the voltages but the finally digitalized value is either 0 or 1. In the end, every voltage is corrected to a prefixed value by a norm. The same thing is true for the words. Digitalisation gives language its fidelity. This is very important. You cannot transmit anything without a set of basic fixed elements. This is clear if we look at primates. Consider, for instance, chimpanzees. They exhibit a smattering of culture but they cannot do anything combinatorial – certainly, they can pass along few local techniques for breaking up a nut, for instance, or for fishing termites, but really they cannot put them together in interesting ways. And so their capacities for transmission are very little.

15. I see. Therefore, the ability to learn words, and not just sounds, is what you think grounds our higher level cognitive abilities. Is language equally important to acquire the ability to enter what you called the «intentional stance» (Dennett 1987)? This is a question that always bothered me. Indeed, the capacity to assume the intentional stance is connected to the capacity to attribute rationality, and rationality is clearly a normative, social concept. However, the intentional stance might also be hard-wired in our brain as a case limit of the design stance. On which side of the Nature/Nurture divide should we put the capacity to enter the intentional stance?

On both sides. I think that, at its bases, the capacity to enter the intentional stance is like an instinct, that in principle we might share even with animals. And indeed, there have been a lot of research in the last 35 years on the so called theory of mind that shows that animals do attribute cognitive states to others – at least to some degree – and that certainly human beings, even from the very young edge, are already alert to picking up the symptoms of the intentional system. Despite of that, there is something in the capacity to enter the intentional stance that is the outcome of cultural inheritance. In fact, very often we over-attribute understanding and rationality to animals and to young

children. In a sense, we deliberately do this, we treat children as more rational than they are, and this behaviour provides them some scaffoldings. Due to our tendency to treat children as more rational than they are, children grow a more mature capacity to adopt the intentional stance.

16. Before finishing this interview, I would like to discuss more in general the extent of your research work. In listening to you giving a speech some days ago, I felt as if you have some sort of social, or ethic, aspiration in your work. You are concerned with the problem of free will because it is related to people's concept of human agency, and you want to change people's way of thinking about moral agency. Is this correct?

Yes, it is. I realised that I am opposing a tradition that is several thousand years old but it is simply a mistake to think that free will in the morally important sense is in any conflict with determinism. Now, various people have realised that over the millennia. I think that early appreciations of this were not very convincing too many people because we did not have conceptual tools to take carefully about reason and intention, but now we do. I think that the idea that moral agency depends on physics, or on the indeterminism of physics, is not just a mistake, but a sort of crippling mistakes. It is a confusion that can lead to seriously pernicious social consequences. For instance, Vohs and Schooler (2008) showed that people who read a passage explaining that they do not have free will are more likely to cheat. I think that, if that vision really takes hold, this can be a misconstrual of the science, a one that is really socially unfortunate.

17. So we have that bad philosophy made from scientists might bring people to have bad ideas about moral agency?

Yes, and I think that it is philosopher's personal responsibility helping everyday folk to understand the implication of science. Right now there is a lot of confusion on this very score. I think that scientists are very good at confusing things, and who better should do clarification work than the philosophers? So we have a job. It is an important job.

18. In conclusion, you think the idea that free will is not compatible with determinism is a false myth, which should be abandoned. I wonder

whether you think that philosophical analysis should bring people to abandon other concepts – specifically, the concept of God. I would like to ask you for a comment on an Italian contemporary debate. Giulio Giorello recently wrote a book, *Senza Dio. Del buon uso dell'ateismo* (Giorello 2010), in which he supports the importance of atheism as a value for democratic societies. He argues that denominational dialogue is not enough to democratic societies if they do not also respect the opinion of those who are not the followers of any religion. Such an idea is open to two interpretations. On a weaker politically-correct reading, religions should be ready to confront even with those accounts rejecting the existence of God. Accordingly, atheism represents a social value because it sticks the public debate on values to a human dimension. On a strongest impolite reading, which maybe Giorello is also supporting, religions are supposed not to be able to dialogue with anyone denying the existence of God. Therefore, atheism is a value because it remembers the importance of reason against any form of absolutist obscurantism of reason. On this second reading, the concept of God becomes more harmful than neutral. Which kind of reading do you think is the more proper to the current situation?

I think that this is a delicate political question, not a metaphysical issue. What we are currently seeing is the continuous retreat of religious conceptions of the world in the face of the advance of the scientific understanding. This is a painful process, and we should recognize that a lot of people had a lot of trouble with it. We should accept that well meaning and intelligent people are trying to devise gentle revisions that will preserve as much as possible of their traditions. I think that is a respectable attempt in what I think it is just postponing the inevitable. We should be firm and as polite as we can be with it, but we should not continue to honour the invocation of mysticism and irrationality, and treat it as if it had some privileged position in the space of public reason. I think that the impolite atheists would say – as I myself used to say – that other religions very often want to “play intellectual tennis without a net”. They use reason when they think they can score points, and, as soon as they are going get stuffed, they play the faith card, and they switch to a different game. I am simply not going to play that game anymore.

19. So you are more on Giorello's side... but what about the concept of God? Do you think we should get out the idea of it, or is there a chance to keep it? Let me translate the question in other words. Feuerbach thought that religion is anthropologically grounded, thereby, it cannot be eradicated from the image the Man has of himself. On the contrary, Marx thought that religion is a part of the Super-structure, thereby a day we will be able to get rid of it. In the debate between the two, you seem to me definitively on Marx's side...

Well, I think that that is not quite right the way how to formulate it. It may be that human frailty and disability are so strong that getting rid of the concept of God entirely is not what is going to happen. In the United States we have these hyper-liberal religious denominations or confessions, like the Episcopalians (i.e., the American branch of the Anglicans), the Congregationalists, and the Unitarians, holding that there is at most one God. Most of them are really atheist, but they like to go to church and to have their own community. If religion were like that everywhere, there would be no particular reason to discourage it. So, I am in favour of talking candidly about religion. If we just get used to talking more openly, more candidly, and more factually about religion, getting away from the idea that we are not supposed to talk about these things that would be a breath of fresh air.

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