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Free Will, But Not As We Know It

Daniel Dennett, director of the Center for Cognitive Studies at Tufts University in Massachusetts, is one of the few philosophers you will have heard of. Over the last 20 years he has produced a series of bestselling books, including Consciousness Explained and Darwin's Dangerous Idea. In his new book, Freedom Evolves, Dennett takes on one of the big questions in philosophy: how is free will compatible with a scientific view of the world?

You quote a Tom Wolfe piece called "Sorry, But Your Soul Just Died", in which he wrote: "Since consciousness and thought are the entirely physical products of your brain and nervous system, what makes you think you have free will? Where is it going to come from?" Does that capture the modern view?

That perfectly expresses the panic that lies just underneath the surface. I wanted to write a book which said that the solution is not to build a moat and keep science out. In fact scientific understanding is the way to preserve freedom and to keep it strong.

This anxiety actually goes back several thousand years. When the Greeks put forward the idea that everything is made of atoms, they realised that this implied that every action that a human being makes is just as much an effect of this great fabric of causation as a stone rolling down a hill. And then where did human agency come in? How could people make a choice?

Was there any way out of this fatalism?

The Greeks came up with a desperate and ultimately hopeless idea of introducing randomness. Every now and then the atoms just swerved. The idea that some sort of indeterminism, some sort of exemption from causation, does the trick goes way back.

But it doesn't work. It's like having a roulette wheel in your head: that wouldn't make you free or responsible for your actions.

Many philosophers argue that there really isn't any incompatibility between determinism and freedom. I agree with them, and have tried to supply a point that I think has been missing: it is a mistake to put determinism and inevitability together and suppose that one implies the other.

Yet that is what they imply. As you say in your book, there could be an all-knowing "Laplace's demon" that understands the laws of physics and the position of every particle in the Universe. Forthe demon, the future is determined as certainly as the past, so people will say this makes a particular future inevitable. Why is this wrong?

I think this is due to a failure to understand what inevitability means. It means unavoidability. Then you can start asking what "avoiding" is. I try to show that in a purely deterministic world, "avoiders" can evolve so they get better and better at avoiding. In the book I explain this by looking for the birth of "avoiders" in some of the simplest computer worlds.

The British mathematician John Conway developed a "Game of Life" in the 1960s, in which a computer screen is divided into pixels. Some are On, filled black, and others are Off. Sets of simple rules determine how neighbouring pixels change. In this very simple world, you can see complex patterns emerge. Some patterns of cells move around and persist for a long time, avoiding being eaten up by others. So here you can see what I call "the birth of avoidance". And right at the moment of birth, we can discern a key distinction: some kinds of harm can in principle be avoided. So in a world where everything is deterministic there can be an increase in "evitability" - a word I use for the opposite of inevitability.

How does this work?

It is the very reliability of deterministic worlds that makes it possible for organisms to extract information from the world so that they can look ahead and avoid disasters that they see coming. In a truly random world everything really would be inevitable. It is just the opposite of what people often think: a world of randomness would be a world where everything was inevitable and nothing was evitable.

Here is another way to think about it. Something is inevitable for you if there is nothing you can do about it. If an undetermined bolt of lightning strikes you dead, then we can truly say there was nothing you could have done about it. You had no advance warning. In fact, if you are faced with the prospect of running across an open field in which lightning bolts may strike, you will be better off if their timing and location is determined by something, since then they may be

predictable by you, and hence avoidable. Determinism is the friend not the foe, of those who dislike inevitability. This should help break the traditional link between determinism and despair.

So freedom is bound up with being able to see the future coming. Having sophisticated nervous systems, we may be better able to predict the future and avoid harm. Is that the origin of your title "Freedom Evolves" ?

Yes. The French poet Paul Valery once spoke of "producing future". I like to think that's what brains are for: they are for producing future. You extract information from the past and use it to produce future, and the more future you can produce the more freedom you have.

At the primitive beginnings of life there is precious little freedom. Then organisms that respond appropriately to changing conditions are the ones that are more likely to have progeny. The tracking of reasons by behaviours is a process that starts very simple and then gradually creates ever more sophisticated "proto-agents". They begin to have the ability to discriminate between different states in the world, and then eventually actively gather information in order to make more long-range adjustment to their plans so that they can be guided by information.

The task of controlling all that freedom becomes an ever bigger part of what you're up to, and in the course of evolution the growth in nervous systems really becomes explosive. At the very pinnacle of that particular heap is us, because we have so many more things that we can do and so many more reasons for doing them or from refraining from doing them.

That seems to imply quite a gulf between us and other animals?

I am always fascinated by the discomfort that people feel with continuity and discontinuity. Any time you say that there is a discontinuity between us and animals they label this as exceptionalism, and say: come on, we're just animals.

And you don't agree?

Yes, we're animals. Yes, we're mammals and yes, we're primates. But we also have features that distinguish us radically from all other primates. The main one of those is language, and the reason that that is such a radical discontinuity is because it means that we're not solitary knowers. We don't have to get all of our information either genetically from our immediate ancestors, or by direct experience. We can get the benefits of the vicarious experience of billions of people over thousands of generations. We don't have to reinvent the wheel or calculus, so we enter the world of culture, which is just a teaming storehouse of tools for thinking – tools for creating more future. And that's what no other species has and that's where our strengths, our intellectual distinction comes from.

A lot of people worry that more scientific knowledge of ourselves is eroding our sense of responsibility. People say: '
Time was, if you became a drunk you lacked moral fibre and had only yourself to blame. Now an alcoholic can claim a genetic tendency to addiction." To quote Tom Wolfe again: "Don't blame me! I'm wired wrong!"

This is what I call the spectre of creeping exculpation. It is entirely understandable because there have been advances which have shown us that people we used to hold fully responsible for their actions are not. The fear that this is the thin edge of the wedge and that there is no stopping it is, I think, entirely misguided for the simple reason that people want to be responsible. Why? Because of the benefits of being a responsible citizen. It gives you the freedom to go out into the world. As long as there are good and powerful reasons for being a member of good standing in the community of responsible citizens, people will not be tempted to excuse themselves on the grounds of their frailties. Once I parked my car in a restricted zone at the airport, forgot about it and went off for a few days. When I came back I realised I was due for some terrible fines. I thought: well, I could throw myself on the mercy of the court by saying I'm an absent-minded professor who was running to a plane. I could plead an occupational frailty. It may have been stupid of me, but I didn't do that. I'm certainly responsible for where I parked my car. As long as we preserve the social, political and economic atmosphere in which being a responsible agent is, and deserves to be, the preferred status, we don't have to worry.