

Why do we cling so tenaciously to the belief that we control our own destiny?

Dan Jones uncovers a paradox

# The free will DELUSION

IT IS the year 2500. Physicists have long had a Grand Unified Theory of Everything and neuroscientists now know precisely how the hardware of the brain runs the software of the mind and dictates behaviour. Lately, reports have begun to emerge that computer engineers at the Institute for Advanced Behavioural Prediction have built a quantum supercomputer that draws on these advances to predict the future, including what people will do and when. Trusted sources say that IABP researchers have secretly run thousands of predictions about citizens' behaviour – and they have never been wrong.

Suddenly, deep philosophical questions are making headlines as commentators sound the death knell for free will. On the face of it, the consequences of proving all our actions are predetermined look bleak. Psychological experiments have shown that undermining people's sense of free will leads them to behave more dishonestly, more selfishly and more aggressively. But perhaps there is no need to panic. Some philosophers have found that our sense of free will is less threatened by determinism than the commentators suppose – so even faced with incontrovertible evidence that behaviour is predetermined, we still see ourselves as free and responsible for our own actions. Nothing will change.

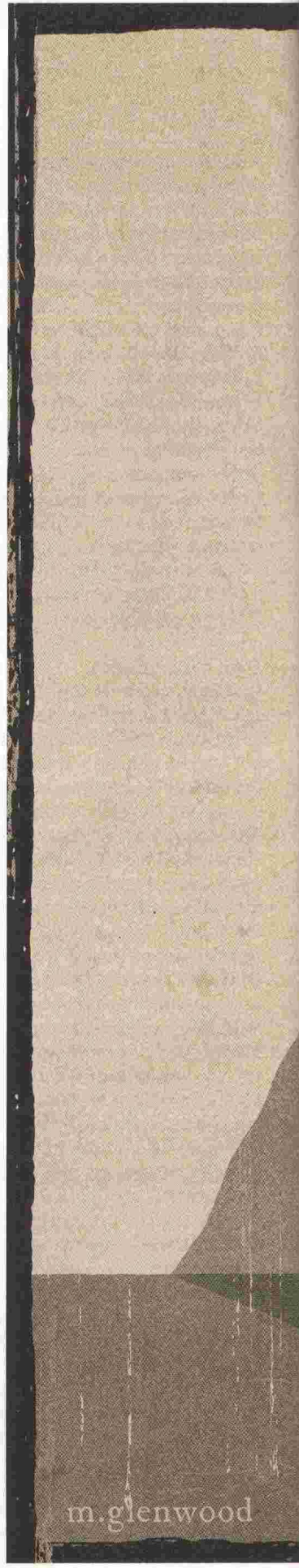
Who is correct? Will the public buy this reassuring message? Or will the manifest truth of determinism kill off belief in free will, taking down notions of moral culpability and punishment with it? Will nihilism, moral disintegration and anarchy follow?

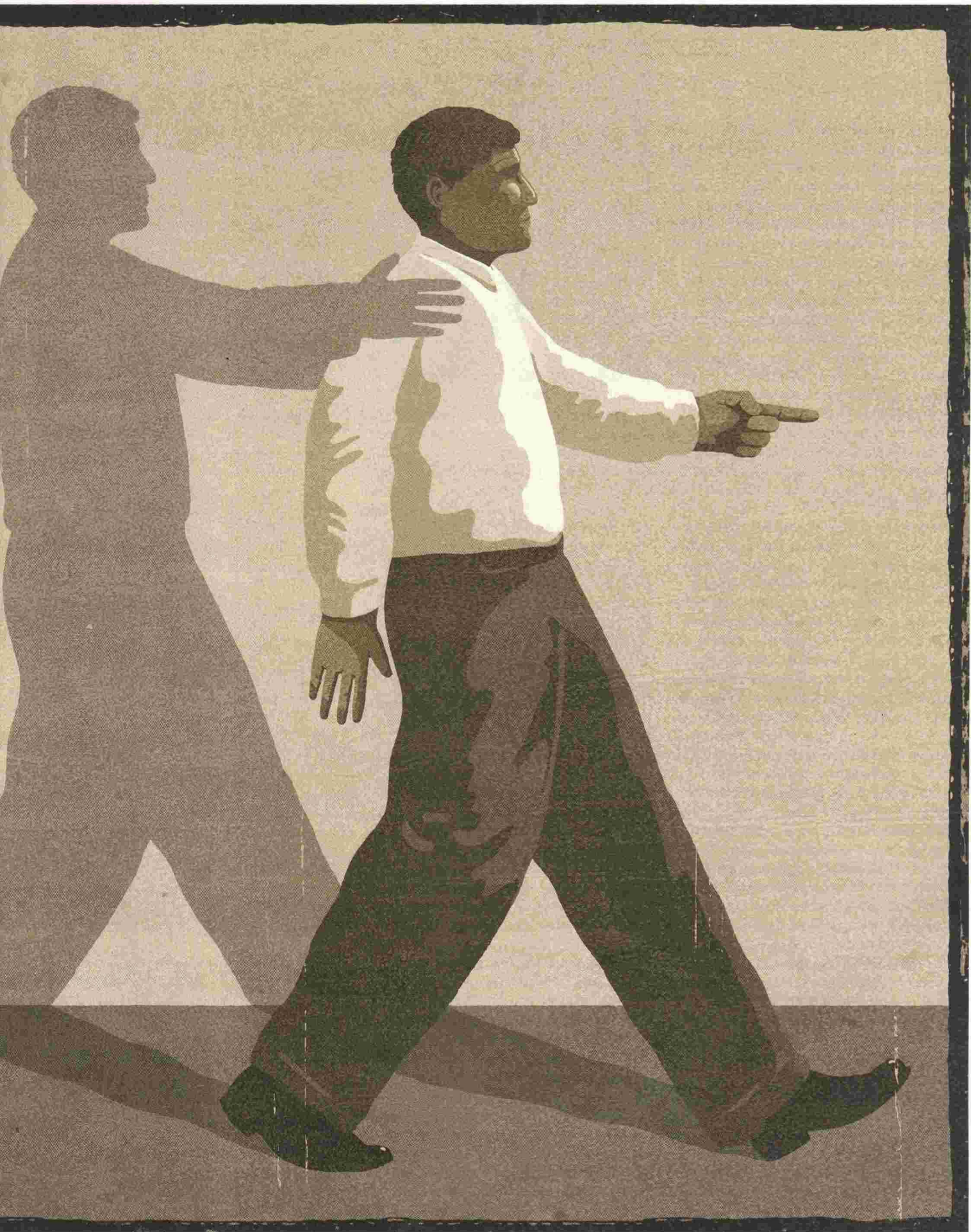
This is not merely an esoteric thought experiment. Neuroscientists increasingly describe our behaviour as the result of a chain

of cause-and-effect, in which one physical brain state or pattern of neural activity inexorably leads to the next, culminating in a particular action or decision. With little space for free choice in this chain of causation, the conscious, deliberating self seems to be a fiction. From this perspective, all the real action is occurring at the level of synapses and neurotransmitters – putting us a lot closer to that deterministic world of 2500 than most people think.

For now most of us are content to believe that we have control over our own lives, but what would happen if we lost our faith in free will? In recent years some psychologists have been trying to find out. In one study, Kathleen Vohs of the University of Minnesota in Minneapolis and Jonathan Schooler at the University of California, Santa Barbara, asked volunteers to read an excerpt from Francis Crick's book *The Astonishing Hypothesis*, which argues that "you are nothing but a pack of neurons", with your sense of free will a mere illusion, however persistent. After reading this passage, participants reported weaker belief in free will compared with those who hadn't read it. When given a mathematics test, which presented an opportunity to cheat seemingly without being detected, those whose belief in free will had been eroded were more likely to cheat (*Psychological Science*, vol 19, p 49).

Another example of the unsettling effects of shaking people's belief in free will comes from the work of Roy Baumeister of Florida State University, Tallahassee. His team asked participants to read either statements that bolstered belief in free will or ones that undermined it. For example: "I am able to override the genetic and environmental factors that sometimes influence my





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## "People don't just believe they have free will, they also believe they have more of it than others"

behaviour" versus "A belief in free will contradicts the known fact that the universe is governed by lawful principles of science". The volunteers were then asked how likely they would be to help another person in a range of scenarios, such as giving money to a homeless person or letting someone use their cellphone.

You guessed it: people whose belief in free will was challenged were, on average, less altruistic than the other group. The researchers also found that priming people with anti-free will statements made them behave more aggressively towards strangers, as measured by how much chilli sauce they added to a dish destined to be eaten by someone who had expressed a dislike of hot foods (*Personality and Social Psychology Bulletin*, vol 35, p 260).

### Will to succeed

So losing our belief in free will could have negative effects on those around us. It could also undermine our own success in life. In a recent study, Tyler Stillman of Florida State University, working with Vohs, Baumeister and others, found that people who said they believed strongly in free will also tended to have more positive expectations about their career success. Is this just delusional thinking? Apparently not. When Stillman and colleagues asked supervisors to rate the work of their employees, those with a greater belief in their own free will were generally rated as performing better than those with weaker beliefs (*Social Psychological and Personality Science*, vol 1, p 34).

All this suggests that our imagined world of 2500 would soon be inhabited by tight-fisted liars, cheats and losers – hardly a recipe for social cohesion. But this presupposes our descendants will accept that there is no such thing as free will. And that is far from certain.

All the evidence indicates that our sense of free will is deeply ingrained. In 1998, the International Social Survey Programme asked around 40,000 people from 34 countries: "Do we make our own fate?" More than 70 per cent answered in the affirmative. And people don't just believe they have free will, they also believe they have more of it than others. Psychologists Emily Pronin and Matthew Kugler of Princeton University found that students there see their life trajectories as less predictable, and more open, than those of their roommates. While they describe their own behaviour as driven by their desires and intentions, they see the actions of others as more in thrall to their personalities. Such

feelings are not simply the product of a privileged Ivy League education, either: waiters in a local restaurant showed the same bias (*Proceedings of the National Academy of Sciences*, vol 107, p 22469).

In fact, a belief in free will is the default setting for most people, according to research by Vohs and others. In experiments where volunteers read statements either reinforcing or undermining belief in free will, the first group behaved no differently from volunteers who had not been primed to think of free will at all. In other words, we do not need to be consciously reminded of free will to act as though we possess it.

Given such strong convictions, would people abandon their sense of free will even if the world were undeniably deterministic? Eddy Nahmias, a philosopher at Georgia State University, Atlanta, has set about finding out. In one study, he and his colleagues asked participants to read about a future very similar to the one we have been considering, with some added details: the computer predicts the birth of a boy, Jeremy, and also that he grows up to rob a particular bank at a given time and day when he is 30. The computer again proves infallible, and Jeremy duly robs the bank.

Now, did Jeremy act of his own free will, and was he morally responsible for his actions? In this study, three-quarters of people said he did act freely, and a full 83 per cent judged him to be morally responsible (*Philosophy and Phenomenological Research*, vol 73, p 28). "Contrary to what many philosophers had assumed, most subjects in our studies said that even in a deterministic universe people have free will and are morally responsible for their behaviour," says Nahmias. This might be enough to maintain the moral and social fabric in the world of 2500.

However, other findings suggest that determinism and free will are seen as compatible only in particular situations and by certain types of people. Joshua Knobe, a cognitive scientist at Yale University, and philosopher Shaun Nichols of the University of Arizona in Tucson gave people a brief explanation of a deterministic universe, and asked them whether it was possible for a person to be fully morally responsible in such a place. Contrary to what Nahmias and colleagues found, 86 per cent of people said "No". However, when the researchers asked people to mull over a concrete case of immoral behaviour taking place in a deterministic universe – a man killing his wife and family so that he can shack up with his mistress – almost

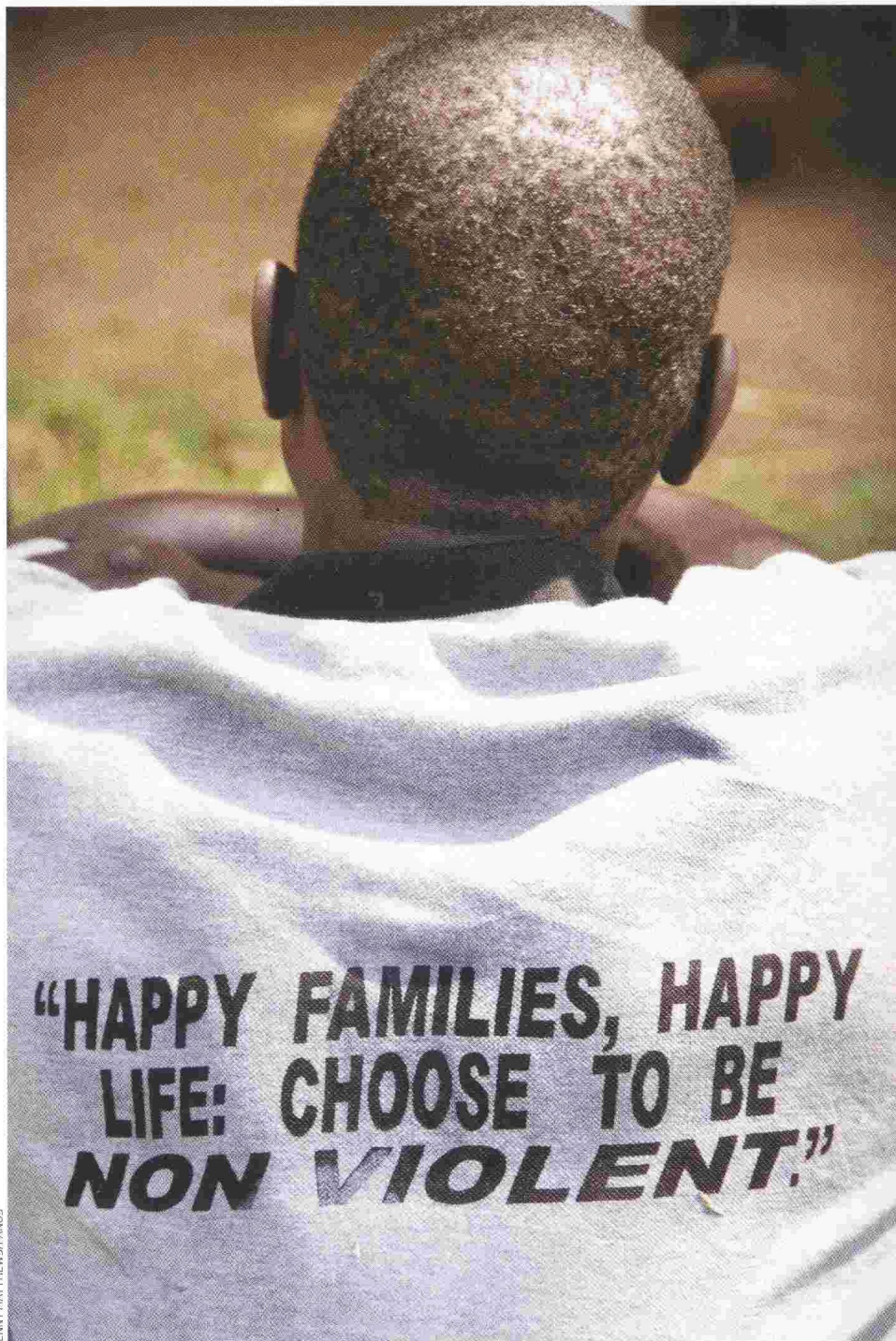
three-quarters of them said the man was morally responsible.

Why the difference between the abstract and concrete cases? Knobe and Nichols suspected that the key is emotion. To test this idea they asked their volunteers to read about two crimes taking place in a deterministic universe, with one sure to arouse strong emotions (Bill stalking and raping a woman), and one much less emotionally laden (Mark cheating on his taxes). As predicted, while two-thirds of people said Bill was fully responsible for his actions, just 23 per cent held Mark fully accountable (*Noûs*, vol 41, p 663). Working with a team of international researchers, Knobe and Nichols have recently replicated these findings in a range of countries, including the US, Hong Kong, India and Colombia (*Mind & Language*, vol 25, p 346).

This suggests that social order would not break down entirely in our futuristic scenario – although petty crime and so-called "victimless" offences might be rife. However, when you start to look at how individuals respond to the reality of determinism this conclusion looks somewhat overoptimistic.

That is exactly what cognitive scientists Edward Cokely at Michigan Technological University, Houghton, and Adam Feltz of Schreiner University in Kerrville, Texas, have been doing. Working with Thomas Nadelhoffer of Dickinson College in Carlisle, Pennsylvania, they assessed the responses of individuals to highly emotional versus less emotive crime scenarios similar to those used by Knobe, and found that most people do not change their judgements about personal responsibility based on the emotional content of the crime. Two-thirds of participants were of the opinion that people cannot be held responsible for their actions without free will – bad news for law and order in a deterministic world. A quarter held the

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JENNY MATTHEWS/PANOS

perpetrators culpable in both cases. Emotional flip-flopers accounted for just 8 per cent (*Mind & Language*, vol 24, p 1).

What makes some people stick more tenaciously to the concept of free will than others? In an attempt to find out, Cokely and Feltz ran the experiment again but this time volunteers also took a personality test. One characteristic stood out above all others – extroversion (*Consciousness and Cognition*, vol 18, p 342). Extroversion is a composite of numerous traits such as assertiveness and gregariousness, but digging a bit deeper, Feltz and Cokely found that here the most important aspect of extroversion was social

warmth. “Warm people might just be more socially sensitive, or at least differentially sensitive to elements of the scenarios,” says Feltz. As such, they might feel the pain of moral transgressions more acutely than others, and therefore be more likely to hold people to account for what they have done.

It is amusing to think that extroverts might save society from moral meltdown in a post-2500 deterministic world. But perhaps it will never come to that. Knobe, for one, suspects that outside the lab we might only accept that our actions are predetermined for a short time. “We have a natural, instinctual tendency to hold people, and ourselves, responsible for

Did his pacifistic instincts make him choose that shirt?

what we do,” he points out. “We can snap people out of this for a little while, but because it’s such a basic aspect of our whole way of understanding the world it’s unlikely we could totally stop society as a whole doing it.”

For Nahmias, the threat posed to free will by determinism has been oversold. What really matters, he says, is whether we retain a sense of our conscious selves being in control of what we do. And that can depend on how our behaviour is described.

### It’s all about me

He has found, for example, that explanations couched in the mechanistic terms of neuroscience – “He did X because neuron Y fired and neurotransmitter Z was released” – tend to undermine people’s belief in free will. But replace the neuroscientific terms with psychological ones – “He did X because he believed Y and desired Z” – and people are less likely to see it as a challenge to free will, even if determinism is true, because it leaves room for a sense of self (*Midwest Studies in Philosophy*, vol 31, p 214).

Yet assuming, as most scientists and philosophers do, that all mental states – including belief and desire – have neurobiological underpinnings, these two descriptions work at different levels. Indeed, Nahmias argues that instead of rendering conscious thoughts and decision-making irrelevant fictions, neuroscience could actually illuminate the biological basis of free will. A better understanding of brain mechanisms might actually show how we go about weighing up options and making decisions on the basis of our preferences, desires and reasons for acting one way rather than another.

Alfred Mele, a philosopher at Florida State University, suggests that when scientists talk about the brain and free will, they need to tread carefully. “Neuroscientists often talk as if our conception of free will depends on having non-physical minds or souls,” says Mele, and as modern neuroscience pretty much rules these out, free will seems to fall too. But this needn’t follow. As Nahmias’s studies show, belief in free will doesn’t depend on having a soul, but on feeling in control of “your” actions. So long as the citizens of 2500 do not lose that perception, the reality of determinism should have little effect on their behaviour. And if the recent studies prove anything, it’s that this feeling of controlling our own destiny is very robust. ■

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