ARE THEY PLAYING OUR TUNE?

Helen Steward

I think of myself as in large part free to do what I want. For example, I can now freely choose to raise my arm, or not to, as the fancy takes me. But perhaps this impression of freedom and control is misleading. In this article Helen Steward explains how the findings of science seems to suggest that we ultimately have no control at all over how our lives go.

Is it up to you how your life goes? Clearly, not entirely. You might be born poor or rich, into a Catholic household or a Muslim one, to caring parents or to uncaring ones. You might live on a country estate or a council estate. You might be tall or short, asthmatic or diabetic, naturally brilliant at maths or congenitally lousy at art. You might, in addition, as your life unfolds, have various kinds of good or bad luck which enormously affects the way your life goes thereafter. (Just think: if you hadn't had that puncture, you'd never have met that bloke in the bike repair shop...). All sorts of things that are out of your control can influence and constrain enormously what happens to you. But I wouldn't mind betting that most of you probably still think that within the limits imposed by external circumstances and by chance, you still have an awful lot of power over the shape of your own lives. You might point out, for example, that you can choose whether to make the most of your talents and abilities, or not. You can make bold, dynamic decisions or timid, safe ones. You can broaden your mind by reading or travelling or talking to people, or not. On this view, a human being might be compared to a composer or songwriter creating a piece of music. There are limits to a person's freedom to determine how their life will go, just as there are limits to a composer's freedom – e.g. limits imposed by instrumental range, musical conventions, technical feasibility, and so on. But that still leaves an enormous amount of scope for a person

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to determine at each point in their lives, which note will come next – and hence ultimately what the 'tune' of their life will turn out to be. And there are millions of different tunes for each of us potentially to compose.

That, or something like it, at any rate, is what most of those brought up these days in liberal Western democracies are encouraged to think. But is it true? Suppose someone were to suggest to you that far from there being millions of possible tunes for you to compose, there was actually only one – and you didn't even get to compose that? The tune which constitutes your life, far from being constantly created and adjusted by you in the role of creative artist is actually just being rolled out on the barrel-organ of the universe, according to a pre-determined score. A barrel-organ contains a pin-studded cylinder turned by a handle – the pins open pipes to act upon the keys as the handle is turned. Once the organ grinder has put the pins in place, only one tune is possible. If the pins are set for 'The Blue Danube' there's no way the organ is going to play 'Waltzing Matilda' instead. Some philosophers think that the pins in the metaphorical barrel-organs of our lives are already in place long before we are even born. Genuine choice, on this view, becomes an illusion and we have no real control at all over which notes are played in which order.

Why would anyone think this? Over the centuries, views of this sort have been held for an amazing variety of reasons. But here is one kind of reason which persuades many contemporary philosophers. Think about what happens when you do an experiment in chemistry. You drop a piece of magnesium into a bowl of water, say. What happens? The magnesium catches fire and zips around on the surface of the water. The same thing always happens – or at least, if it doesn't, there'll be a scientific explanation of why it didn't – perhaps the magnesium had become coated in some chemical which prevented it from coming into contact with the water, say, or there wasn't enough oxygen in the room. In other words, we can correctly *predict* what will happen, as

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long as we know enough about the conditions in which the experiment is done. Indeed, the thought might occur to us that if we only knew enough, we could predict not just that the magnesium will catch light – but also what exact route it will trace around the surface of the bowl. Which trajectory it takes presumably depends on some determinate set of things, after all – perhaps the size and shape of the magnesium, the size and shape of the bowl, surface tension in the water, etc. The magnesium itself certainly doesn't have any say in the matter – it *has* to act in a given way. And so perhaps if we only knew enough about all the circumstances, we could predict not just roughly but *exactly* what the magnesium will do – to the nearest millimetre and nanosecond. Or take another example, this time from physics – if you drop a ball of a certain shape and size out of a window from a certain height, you can predict that it will reach the ground travelling at a certain speed – or at least, if it should turn out that actually it doesn't hit the ground at the mathematically predicted speed, that will be because of some factor we forgot to consider, like the wind or friction. Again, the behaviour of the ball in completely determined by some perhaps complicated but in principle finite set of factors which, if we could only know them all, would enable us to predict exactly what would happen. The ball itself has no choice.

Reflecting on cases like these, it might be quite natural to wonder whether actually, perhaps the whole universe might be in principle totally predictable down to every last detail if only we knew enough about all the various causal forces acting in each and every part of it. That's to say, the whole universe, *including us human beings*. As David Hume put it, writing in the eighteenth century:

> [...] matter, in all its operations, is actuated by a necessary force, and [...] every natural effect is so precisely determined by the energy of its cause that no other effect, in such particular circumstances, could possibly have resulted from it. The degree and

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> direction of every motion is, by the laws of nature, prescribed with such exactness that a living creature may as soon arise from the shock of two bodies, as motion, in any other degree or direction than what is actually produced by it.
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> *Enquiry Concerning Human Understanding*, ed. Selby-Bigge (Oxford: OUP, 1975), p. 82.

Now, most human motion is produced by events which occur in the brain and central nervous system. Human brains are very complicated organs, granted, and we do not at present know all that much at all about how they work. But still, someone might think, they are basically just places where extremely complicated chemical reactions take place and electrical impulses occur – leading eventually to the bodily movements which constitute our speech and actions. If we only knew enough about which chemicals were in which places in which concentrations, and which neurons had just fired in which patterns in a given person's brain, perhaps we'd be able in principle to predict what that person would do next. And if that were so, wouldn't the person start to seem a bit like the magnesium or the ball – something which is simply constrained by its nature and the circumstances in which it finds itself, to act in a single given way?

Scientists these days tend to assure us that the universe is not totally predictable in principle in the way this picture suggests – that we must make a place in our world view for indeterminacies at the level of quantum physics, for example. That might reassure us that more than one path through life might be available after all – which path becomes actual depending at each point in time on chance movements and changes at the quantum level. But it isn't clear that it would be right to feel reassured. Even if quantum indeterminacies do in some sense make multiple futures possible for the universe, it still seems rather hard to understand how a *person* could have a role in determining which of those multiple futures comes about, in the way we all common-sensically

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suppose we do. It rather looks now as though we are now being told: 'Don't worry! It's not true that everything is determined and predictable! What happens also depends on chance!' But it doesn't help me to feel that I am properly in control of my life to be told that what I do is dependent not only on a complex mixture of causal factors which are outside my control, but also on an element of randomness. For the random element is out of my control too.

I think we ought to be extremely reluctant to give up the common sense view that human beings do possess the power to make actual any one of a number of different possible futures – and that we are all constantly exercising this power. We should proceed, it seems to me, on the assumption that any view which entails that we do not have this power is highly likely to be wrong. But how can we have it, if each word we say, each move we make is determined by events in our brains (plus chance, perhaps) which are in turn determined by prior events in our brains and they by still prior events... Where do *we* get in on this electro-chemical maelstrom? The only possible answer would seem to be that when certain sorts of event in our brain determine what we shall do or say, that *constitutes* a person's determining what he or she will do or say. But it is quite hard to see how any event's bringing something about could actually at the same time be *a person's* bringing something about, if that event's occurrence is entirely explicable in physical/chemical terms. The availability of the physical/chemical explanation of the occurrence of that event seems to turn a person into a mere arena for the changes which result in her actions, and prevent her from genuinely being the instigator of any of them.

Perhaps it may be that there is a way of denying that the occurrence of all brain events is entirely explicable in physical/chemical terms. What does 'entirely explicable' mean, after all? Perhaps certain rather complex, high-level events *can't* actually be explained in physical/chemical terms. Let us hope, at any rate, that there is something wrong with one

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of the assumptions made by the picture of the universe I've tried to describe for you. Because if there is not, it looks as though it isn't I who is composing the tune which constitutes my life – and it isn't you who is composing yours. It is being played instead by microscopic particles, the laws which they obey and the random events in which they participate. It is they who are playing our tune.

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