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Chapter 1

INTRODUCTION

This book is about who, or what, makes the decisions that we call our own. ‘Decision’ is a clumsy word, but I couldn’t use ‘choice’ in my title. It would have misled US readers, for it puts many in mind of the abortion debates. I won’t be discussing specific choices, but rather what is behind them in general. Is the action wholly due to nerve cells in the brain, or does some other aspect of our nature play a part? Do we really have responsibility for our deeds, or is that feeling an illusion? Are outcomes wholly fixed in advance, or is there some flexibility? All these questions relate to free will or the lack thereof, and getting to grips with them is a bit like being immersed in a complicated detective story. The clues and the evidence needed to uncover what is going on are very varied. Those that I describe range from 21st century discoveries about the chemistry of nerve cells, through the motives behind Brutus’s assassination of Julius Caesar, to the curious case of the black pumas. Unlike a detective story, everything that I recount here is based on real events or research findings – with one exception: in two chapters I have woven a tale of a fictional character to show what the clues may mean. Before getting down to it, though, I must set the scene with the ghost of an idea that has, for over two hundred years, haunted our thinking on whether choices can be free.

Julien de la Mettrie, a French doctor caught up in the intellectual ferment of the Enlightenment, was a prolific writer best remembered for just one of his books. More accurately, he is mainly remembered for the title of that book: *L’Homme Machine* or ‘Man a Machine’. If matter could be self-organising, as some

were beginning to suppose, then life itself might be mechanical and we humans nothing more than complex machines. There would be no need for souls or other mysteries to provide our vital spark. Matter on its own could do all that was necessary to produce a living, feeling human being.

It was an idea that had been incubating for a very long time, boosted by the writings of people like René Descartes and Thomas Hobbes in the previous century. Nevertheless, describing it as clearly as he did proved both de la Mettrie's making and his undoing. He must have known when he wrote that he was pushing his luck with the French Establishment, since he published his work anonymously (in 1747). But his identity was soon uncovered and he had to flee to Prussia. *L'Homme Machine* was banned in France. The implication that his ideas made God redundant was too forceful and too premature. As late as 1766, a far more famous author, Jean-Jacques Rousseau, was expelled from France for atheism. A few years later, though, other French thinkers expressing equally materialistic views remained unhounded for their materialism, if not for their politics. Incidentally, Rousseau found refuge, not in Prussia, but the Peak District of England. He was assisted in doing so by the Scottish philosopher, David Hume, whom we briefly encounter in Chapter 4. Rousseau repaid Hume by developing paranoid delusions about an international conspiracy against himself directed, he thought, by his benefactor. De la Mettrie, on the other hand, kept his sanity and even got a pension from the Prussians, for he was known as something of a *wunderkind*. He died of a fever, still in exile and aged just 43.

The notion that we might be 'nothing but' machines was already implicit in the writings of the Roman poet Lucretius, over 2000 years ago. His opinion that there exist only 'atoms and the void' was taken from Leucippus, Democritus and Epicurus, Greek philosophers of a few centuries previously. Epicurus had tried to soften the consequences of his views by suggesting that atoms sometimes randomly swerve. This might allow the possibility of

free will, he thought. Evidently the implications for free will have bothered a few people for a very long time. Throughout most of history, though, such notions have been entertained by a tiny number of maverick thinkers and ignored by almost everyone else. But they have gathered force and permeated popular culture over the last two or three centuries, helped by innumerable writers in the de la Mettrie mould. Most serious scientists in the 17th–19th centuries were theists of one sort or another¹, many also endorsing some concept of soul. In the 20th century this was far from the case. For several generations now, the mechanical metaphor has dominated the thinking of the majority of physiologists and biologists, as well as many psychologists. Feedback between these specialists and the wider public has established the idea as the default setting in many people’s thinking.

James Watson, co-discoverer of the double helix structure of DNA, is alleged to have asserted, in a presumably conscious echo of Lucretius: ‘there are only atoms... everything else is merely social work’. Watson’s former colleague, Francis Crick, became a leading figure in the study of consciousness before his death in July 2004. His popular book, *The Astonishing Hypothesis*, published in 1994, contained the ringing declaration that our joys and sorrows, our memories and ambitions, our sense of identity and free will, are ‘no more than the behavior of a vast assembly of nerve cells and their associated molecules’. In one way, Crick’s hypothesis is not astonishing at all, because the mechanical metaphor has become so ingrained in our world-view. Yet it is indeed surprising because entirely counter-intuitive to our personal experience. There is an ever-growing industry devoted to tackling what David Chalmers² has delineated ‘the hard problem’, namely how it is that the rich world of our subjective experience could possibly arise from goings-on in a bunch of nerve cells. Success in this endeavour remains elusive.

The problems are especially pressing when it comes to free will. The mechanical metaphor appears to imply that all our actions must ultimately be determined either by physical law or by

chance. After all, machines do only what they must. A vacuum cleaner cannot suddenly decide that it would like to be a dishwasher today. A computer has no choice but to follow its programming. Everyday experience, though, hints at something quite different about ourselves. We feel that we are able to choose what we shall do. If pressed, most of us would admit that many of our 'choices' are in fact random or else determined by outside influences. We would nevertheless be reluctant to give up the idea that we have a core ability to freely decide for ourselves what we shall do, independently of any external or internal pressures. Moreover, many of our social structures, including the entire criminal justice system, are built on the premise that people are usually responsible for their actions. It would be worrying, to say the least, to suppose that this apparent capacity for responsibility might not really exist³.

The almost daily triumphs of modern molecular biology and neuroscience all point to the value of the mechanical metaphor. De la Mettrie was clearly a true prophet, whose approach has born amazing fruit. Regarding bodies and brains as biochemical machinery has allowed discoveries that have doubled our average life span since his time and produced treatments for disease that he could not have imagined. All sorts of advances are rapidly eliminating possible let-outs for those wanting to deny that consciousness is solely a product of our brains. It seems only a matter of time before the last escape route is closed. If our brains are machines, so too must be our minds. That, at least, is how the situation appears to many. Most people in the cultural mainstream are probably prejudiced towards thinking this way.

There are various approaches to squaring the circle – to trying to reconcile the usefulness and predictive power of mechanical models with the fact that they simply don't fit in with how we feel about ourselves. Most of these approaches take free will to be something of an illusion. Many of the philosophers currently writing on the topic, and some of the psychologists, regard the idea as a construct of what they refer to as 'folk psychology', which has

little or no validity in their opinion. My approach is different. I propose a more fruitful metaphor for the machine one. We are, I argue, more like stories or films than like machines. Of course stories have to be written with pens or word processors and put into books, while films must be shown through projectors or on television sets. Apparatus of this type has its parallels in ourselves, and the machine metaphor is entirely apt in that context. It is not apt, though, in relation to the essence of the story or film. I intend to show that free will and responsibility are properties of the tale, not of the apparatus with which it is told.

I wish not to exorcise the ghost of de la Mettrie so much as to lay it in its proper context – to show how the spirit of his ideas, the ghost of the machine metaphor, fits in with an adequate picture of what we are. There is also another ghost: the one that is *in* the de la Mettrie machine. This second spectre is the essence of ourselves, which has traditionally been termed a soul; I will show how it shares, along with the machine, a degree of responsibility for our actions. It's worth pointing out that, while de la Mettrie's critics were right to suppose that the mechanical metaphor tends to make God redundant, the story metaphor is neutral in this respect. We, along with our relatives, associates, teachers and societies, may be the sole authors and audiences of what we are. Or we may not.

If we are indeed like stories, we are tales that write themselves through the mechanistic apparatus of our brains. In that case, some might object, we must really be machines after all. One of my main aims in what follows, therefore, is to put flesh on the 'story' metaphor and to show that this apparently plausible objection is irrelevant. Starting with some very basic assumptions of the mechanistic view of mind, ones that would have been entirely acceptable to Crick and probably to Lucretius himself, I develop a picture of free will and some other aspects of mind that is wholly compatible with everyday experience. The new picture will give more detail than folk psychology provides, but is no different from a user's own point of view.

Perhaps the most interesting thing about this way of looking at ourselves, at least for those of us who tend to see things from de la Mettrie's viewpoint, is an implication that the really significant constraints on individual free will are not what might be expected. They are not due to physical law or the computational nature of neural information processing. They are in fact due to the story lines available to people. As this is relatively unexplored territory, I examine it in some detail. This picture of a story line shows that it can be thought of as a set of meaningful concepts which are either embodied in people or serve to link them. There is a sense, it turns out, in which the stories connected with a person can sometimes *become* that person. At other times these stories can appear to act according to their own logic, and in ways that people under their influence would not normally have chosen. Indeed, de la Mettrie's proposals were themselves a story line of this type, though the examples I give are mostly of simpler tales.

The notes to each chapter (see p. 193) provide extra information to that in the main text, for anyone who may want a bit more detail. They can be skipped, without risk of missing anything essential. If in doubt, take a look at the three notes to this introduction: they give the flavour of the rest. As to sources, the journal *Nature* has proved invaluable due to its rigour and wide coverage. *The Journal of Consciousness Studies*, too, has provided important material. It has been going since 1994, and was the first multidisciplinary journal to be devoted to the topic. A lot of what will be discussed here has been aired in its pages at one time or another. Other people's ideas are described in the text or can be inferred from the references provided. The overall conclusions however, along with any errors or misconceptions, are my own and cannot be blamed on other writers!

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