FREEDOM OF CHOICE AND ACTION

Text of presentation at Kingston Philosophy Café on Wednesday 30 September 2015

1. *"I'm free to do what I want any old time...I'm free to choose what I please any old time…"* That's not me. That's the Rolling Stones in their 1965 song *I'm Free*. Let's look first at the *doing* part of the claim – in other words, freedom of *action*. The obvious response to the Rolling Stones, or to anybody else, who claims "I'm free to do what I want any old time" is "Oh no, you're *not*!" Our actions at any time are limited to what is *actually possible*. The world, of which we ourselves form a part, displays *regularities* from which we conclude that some things are possible and others not. We are free, for example, to walk through an open doorway but not through a wall, free to jump off the ground but not to float unsupported above it. We appear to be most free in our imaginations (we can *imagine* walking through a wall or floating above the ground) but even here there are limitations. It does not seem possible, for example, to imagine a two-dimensional shape that is *at one and the same time* both square and circular. Just try!

2. *So*, if the Rolling Stones were to sing "I'm free to do what I want any old time – *as long as it's actually possible*", would we *then* agree? Might we not have to ask: "actually possible for *whom*?" The ability of people to perform different physical and mental activities varies widely. Such ability can often be improved with practice and effort but only to a *limited* extent. Most people, however hard they try, will never be able to run 100 metres in under 10 seconds, play Beethoven's Moonlight piano sonata or explain Einstein's general theory of relativity.

3. *So*, if the Rolling Stones were to sing "I'm free to do what I want any old time – as long as it's actually possible *and* within my own physical and mental capabilities" would we *then* be happy? Might we not want to add two further qualifications: that our freedom to do what we want at any time *also* depends upon the absence of precluding circumstances (such as being locked up in prison) *and* the availability of whatever is needed to allow us to do it (for a pianist, for example, a piano)? So perhaps the line should become: "I'm free to do what I want any old time – as long as it's actually possible *and* is within my own physical and mental capabilities *and* is not precluded by circumstances beyond my control *and* whatever is needed for it to be performed is available to me". By now, of course, we have ruined a perfectly good song but are perhaps closer to something we can all agree with.[1]

4. It is important, at this stage, to question what we mean by a human *action*. Clearly it involves *doing* something. Body movements seem obvious examples. To count as *actions*, however, such movements need to be in some way *intentional*. On this basis, we would not regard a *random* movement such as a twitch as an *action*. The same applies to our vital functions – including breathing, blood circulation and digestion. Although far from *random*, being constantly controlled by our autonomic systems, these are not normally or to any significant extent under our *intentional* control. We can, of course, intentionally alter the pattern of our breathing – take deep breaths, for example – but we can't hold our breath

[1] We have touched here upon the important distinction between *negative* and *positive* freedom. The absence of a law forbidding poor people to become better off, for example, does not make them free to do so. This may require *positive* intervention (including some system of income redistribution).

indefinitely. We can lower our pulse rate and blood pressure by intentionally relaxing and thinking calming thoughts – but only to a limited extent. We might note in passing that if we could intentionally reduce our heartbeat to *zero*, unassisted suicide would be available to us all – but we would then have to be *very* careful about controlling our thoughts, especially when feeling depressed.

5. A key feature of an action thus appears to be *intention* or *purpose*. Raising my glass of beer, taking a sip and replacing the glass, for example, clearly involves a controlled and co-ordinated set of movements designed to achieve a given purpose. The purpose is *not* to perform the movements for their own sake but, through them, to obtain the (albeit trivial) pleasure associated with drinking and tasting some beer.[2] My beer-drinking example serves to highlight a fundamental problem with the concept of 'an action' – namely, how *continuums* of intentional activity can be divided into discrete 'actions'. Just now, did I perform a *single* action (drinking some beer), three actions (raising the glass, taking a sip, replacing the glass) or perhaps *thousands* of actions represented by the individual movements of individual muscles in my arm, hand, and fingers? Referring to Kierkegaard's aphorism "We live forward, we understand backward", the American pragmatist William James argued that "to understand life by concepts is to arrest its movement, cutting it up into bits as if with scissors."[3] Our 'cutting up' of the *continuums* of our intentional activity into discrete actions might be influenced by the identified *purposes* to which such activity relates. In the case of my taking a sip of beer, for example, all the movements involved *might* be seen as directed towards a single purpose and thus as constituting a *single* action. However, much of what we do serves multiple purposes and involves diverse activities extended over time. Crucially, our intentional activity tends to be *hierarchical* – we perform actions within actions. To give a simple example, my getting dressed in the morning might be regarded as a single purposive activity and thus as a single action. However, the putting on of each separate item of clothing could *also* be seen as a distinct and separate action. The same applies to the doing up of each separate button on my shirt. It seems clear that what we see as separate actions depends upon what particular bit of our intentional activity we choose to *focus* upon.

6. A distinguishing feature of *intentional* activity appears to be that we have some *choice* in both *whether* and *how* we perform it. In the case of my getting dressed, I clearly have a choice regarding exactly *when* and *how quickly* I get dressed, *what* I put on and in what *order* (whether, for example, I put on my right shoe before my left, or vice-versa). It is

[2] Contrary to the wording on some tee-shirts, Benjamin Franklin did not actually say "Beer is proof that God loves us and wants us to be happy." He did, however, say something very similar about wine: "Behold the rain which descends from heaven upon our vineyards; there it enters the roots of the vines, to be changed into wine; a constant proof that God loves us, and loves to see us happy." He also said: "In wine there is wisdom, in beer there is freedom, in water there is bacteria."

[3] "We live forward, we understand backward, said a Danish writer; and to understand life by concepts is to arrest its movement, cutting it up into bits as if with scissors, and, immobilizing these in our logical herbarium where, comparing them as dried specimens, we can ascertain which of them statically includes or excludes which other. This treatment supposes life to have already accomplished itself, for the concepts, being so many views taken after the fact, are retrospective and post mortem. Nevertheless we can draw conclusions from them and project them into the future. We cannot learn from them how life made itself go, or how it will make itself go; but, on the supposition that its ways of making itself go are unchanging, we can calculate what positions of imagined arrest it will exhibit hereafter under given conditions."
William James, *A Pluralistic Universe*, 1909

important to recognise that choices can be *intentional* without necessarily being *conscious*. For much of our intentional activity – such as getting dressed – we go into 'automatic mode' and may only occasionally be aware of making *conscious* choices – for example, when deciding which shirt to wear or when a problem arises such as a shoelace breaking. The fact that we are not *conscious* of directing much of our activity, however, does not make it *undirected* or *random*. For example, when driving our cars, perhaps listening to the radio or chatting with a passenger (although not, one trusts, using a mobile phone!), we are not *conscious* of making continuous adjustments of speed and direction in order to stay on the road and avoid colliding with other vehicles. But the fact that we normally arrive safely at our destinations shows that we *do* make such adjustments, that they are *directed* and not *random* and that they involve mental processes of recognition and *purposeful* response to changing 'signals' from the outside world.

7. Unless we are able to make *choices* the question of *freedom* of choice simply doesn't arise. The exercise of choice appears to require at least two *possibilities* between which to choose. *Impossibilities* – for example, jumping over the moon – cannot be the subject of choice. A choice can be simply between doing or not doing something – between, for example, drinking or not drinking another pint of beer. So-called 'Hobson's choice' arises where, out of two or more *superficially* available options, only one is *in practice* acceptable.[4] Many choices involve a *wide range* of possibilities – for example, choosing where to go on holiday, how to spend our spare time or what to select from a restaurant menu. The problem for the chooser is often to narrow these down and then to select from the remainder. If there is literally *nothing* to choose between them, a random final choice (akin to tossing a coin) may have to be made.

8. At his point, we might note the following key features of choice and choice-making.

- Making a choice requires not only that what is chosen be *possible* but also that the act of choosing be itself *instrumental* in bringing it about. Without such instrumentality there is no choice – for example, although it is *possible* to win the national lottery we can't *choose* to do so. We can choose only to buy a lottery ticket – and hope!
- When we make choices we do not first 'choose to choose' – with its potential for infinite regress. We just choose – although there *are* circumstances when we might choose to abandon or postpone the making of a choice.
- Our choices arise from *awareness* of alternative possibilities generated usually by external triggers – such as arriving at a road junction.
- Our ability to make choices is often linked to the choices of other people. One can choose to accept a job only if someone else chooses to offer it. One can choose to enter into a personal relationship with someone only if that person chooses likewise.
- The existence of power relationships in society means that the choices of some people can have far-reaching effects – for example, the decision of Julius Caesar to cross the Rubicon or of Hitler to invade Poland.

[4] Thomas Hobson was a 16th/17th century livery stable owner in Cambridge who, in order to rotate the use of his horses and prevent customers always choosing the best, gave his customers the choice of either the horse in the stall nearest the door or none at all. A modern example of Hobson's choice is the supposed no-brainer question posed by comedian Eddie Izzard: "which do you want – cake or death?" As long as the death promises to be quick and painless, however, the older I get the more I might be inclined to ask: "what *sort* of cake and how *big* a slice?!"

- Choice-making is embedded in intentional activity. As we have seen, it may take place subconsciously and as an immediate reaction to external triggers. It often, however, involves a conscious effort over an extended period of time, finding out facts to inform the choice, consulting with others and imagining the consequences of alterative courses of action – choosing what career path to follow is just one example.
- Many choices generate chains of subsequent choices, in the light of which earlier choices may need to be revised. The process is thus often *recursive*.
- Many of our choices are not implemented immediately but are 'stored' as *intentions* – for example, choices made *now* about what we are going to do *tomorrow*. Choices are embodied in intentional states and these are as much part of 'the world' as anything else. Making choices, it could be argued, thereby alters the content of the world, whether or *not* they involve body movements.

9. This last point is vitally important and we need to pursue it. Much philosophical discussion of so-called 'free will' seems fixated with the relationship between thought and body movement and, moreover, with very basic examples of it – such as a choice to raise an arm. The implication seems to be that choice is *necessarily* directed at, and results in, bodily actions. However, *mental* activity constitutes action as much as bodily activity and is equally the subject of choice. Within limits, we can and do, choose the direction and subject of our thoughts. We can, indeed, choose to put our minds to choosing something – and in *that sense*, at least, *can* choose to choose. In discussing freedom of action, John Locke includes thinking, along with body movement, as a form of action. "All the actions that we have any idea of, reducing themselves, as has been said, to these two, viz. thinking and motion, so far as a man has power to think, or not to think, to move or not to move, according to the preference or direction of his own mind, so far is a man *free*."[5] The freedom to *think* what we like – to *choose* our own thoughts regardless of whether or not we are free to *express* them – is something we like to suppose no-one can take away from us, although the possibility of being 'brain-washed' is always a concern.

10. Given the complexity of much of our choice-making, particularly in the social and moral sphere, philosophical fixation with, and attempts to generalise from, the making of minor and usually inconsequential movements of parts of the body appears downright *perverse*. Worse than that, they *misconceive* the nature of the *reality* of which we form a part. Much of our choice-making is *not directed at*, *barely involves* and is *meaningless in terms of*, body movements. Take, for example, one of the most common of human activities – talking to one another. Such talk is *purposive*. Its purpose is *communication* not the exercise of our vocal chords which merely provide the means. What is happening is inexplicable in terms of their movements. It is meaningful only in terms of the *messages* exchanged. We should note here that the fact that we are not usually aware of choosing each word before we utter it does not make what we say in any way *unintentional*. To give another example, casting a vote in an election involves all sorts of body movements including walking to the polling station and, crucially, marking a cross on a piece of paper. What we are doing is inexplicable, however, in terms of the movements performed. These provide means not ends. When we mark a cross in a box we are not choosing between *boxes*, we are choosing between *candidates* on the basis of thought processes related to the

[5] John Locke, *An Essay concerning Human Understanding*, 1689, (Book II, Chapter XXI, Paragraph 8)

social and institutional world that exists only in our heads and that includes elections as a feature of representative systems of government.

11. Philosophical discussion about freedom of choice and action has tended to focus on issues raised by *causation* and, specifically, *causal determinism*. On the one hand, causal processes appear essential to our making choices and acting as agents in the world. To *purposefully* affect the world through our choices and actions the following seem necessary.

- The cognitive systems comprising our minds must grasp how causal processes operate in the world – thereby enabling us to choose actions *relevant* to the achievement of desired goals.
- Our *mental* and *brain* processes must interrelate in some way.
- Processes in our brains and nervous systems must be able to cause bodily movements including those that provide the means for human intercommunication.
- Such movements must be able to cause the world to be different from what, in their absence, it otherwise would be.

At the same time causal processes appear to *threaten* our freedom of choice and action. Our brains and nervous systems appear to be as much part of the world as anything else, consisting of the same sort of 'stuff' – reducible ultimately to 'elementary particles' – and subject to the same forces and causal processes. If *mental* activity is linked causally with *brain* activity, and if brain activity is causally *determined*, how can we then exercise freedom of choice and action? Such freedom, however, appears *equally* threatened by causal *indeterminacy*. Quantum mechanics holds that the position and form (particle or wave) of stuff at the sub-atomic level is *indeterminate* and cannot be predicted with absolute certainty, only in terms of *probability*. Such indeterminacy, *if* operating at the macro-level of our mental and brain processes, would appear to make our choices and actions equally *probabilistic* i.e. a matter of *chance* and, therefore, *random* and not under our own *control*. Postulating, as did mediaeval theologians and as many people still do, a *non-physical* substance in which our thinking selves are realised and which is not subject to the causal laws affecting *physical* substance, only complicates matters further. Unless non-physical substance displays *regularities* in its operations, our thought processes and thus choices and actions would be random. Crucially, it is unclear how a causally undetermined non-physical substance could possibly interact with, and make any difference to, a quite separate and causally determined physical substance.

12. Causation, and the highly complex issues it raises, would provide the subject for not just one but several Kingston Philosophy Café sessions – so I shall confine myself to a few brief comments relevant to the issue of freedom of choice and action. As with actions, our identification of 'causes' and 'effects', depends upon how we 'cut up' observed phenomena. From different perspectives each 'cutting' can be seen as *both* a cause *and* an effect. We may then suppose a *chain* of causes and effects stretching back into the past and forward into the future. If traced back about 14 billion years, the chain is supposed, on the basis of current astrophysical 'wisdom', to *stop* at the so-called Big Bang. At this point, for some reason, the concept of cause and effect ceases to apply. Everything that has happened going *forward* from the Big Bang, however, has *supposedly* had its origin in *something* about the 'singularity' that existed at the time. However, it seems *literally incredible* that *everything*, not just the behaviour of particles in fields of force but *all* human choices and actions – from the trivial ones displayed, for example, in our purchases of drinks tonight to the critical ones

displayed, for example, in the events of the Second World War – should have *originated from*, and *be explainable in terms of*, this postulated and wholly mysterious 'singularity'.[6]

13. If our choices and actions are nothing but the workings out of molecular, atomic and sub-atomic processes traceable back to the Big Bang it should be possible to imagine what causal chains might be involved. When we try, however, we fail. Consider, for example, the neurobiological and lower level processes associated with my now deliberately taking a sip of beer. To what particular processes or states of affairs existing a year ago, before I was born, before life evolved on earth, before the formation of the solar system, or at the moment of the Big Bang might the processes now occurring in my brain be *causally* linked?

14. In trying to understand and make predictions about what we experience – including *ourselves* – we develop conceptual models based upon observed regularities in the way things behave. Broadly speaking, the models of the so-called *physical* sciences deal with the micro and macro level behaviour of 'stuff' (of, for example, atoms, weather systems and stars) and those of the so-called *social* sciences with *human* behaviour (mainly social, political and economic). A crucial area of 'cross-over' (particularly affecting disciplines such as neurobiology, psychology and, indeed, *philosophy*) arises from the fact that humans (and other animals) exist as *both* configurations of stuff *and* conscious and purposive *agents* whose choices and actions make a difference to what goes on – at least on planet Earth if not in the rest of the Universe.

15. To make sense of human and animal behaviour, a conceptual model appears to be required that allows for 'top down' causation by cognitive systems realised within brains. This implies the ability of *system level* phenomena (such as desires, intentions and choices) to be realised *through*, but at the same time to *affect*, the micro-level behaviour of system components (for my decision to recite a particular poem, for example, to determine the particular neuronal firings that subsequently take place in my brain) as well as the space-time trajectory of related stuff (for my decision to go for a cycle ride, for example, to determine the subsequent location of the molecules composing my body, clothes and bike).

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[6] "The idea that the evolution of reality over time might depend solely on 'initial conditions' together with purely physical laws, is a really quite extraordinary one… After all, the evolution of reality is profoundly influenced (we tend to think) on a large scale by things such as wars, stock market crashes, global warming, revolutions, industrialization, etc., as well as (on a small scale) by the myriad small decisions each of us makes on a daily basis. To suppose that the occurrence of any of these sorts of things is no more than the high-level manifestation of the inevitable workings-out of the consequences of the initial conditions at the start of the universe (deterministic version) – or else of those initial conditions and merely probabilistic laws, together with nothing more than what may perhaps notionally be thought of as the contribution of mere chance (indeterministic version) – is perhaps one of the most astounding things that has ever managed to obtain the status of philosophical orthodoxy (although it must be conceded that there is strong competition for this title). To believe this would seem to be to consign all sorts of factors that it is natural to regard as causally crucial to the realms of the utterly epiphenomenal. Nothing really matters it would appear, in anything other than an extremely attenuated sense of 'matters', to the unfolding of the world, except the way physical reality was in the beginning, the physical laws, and (perhaps) whatever vagaries are allowed for by the existence of chance. How are we to make room, given this picture, for our basic conviction that we matter to that unfolding, both individually through our actions, and as a species through the phenomena to which our activities have given rise: societies, governments, armies, businesses, religions, technologies, art, literature, science?"
Helen Steward, *A Metaphysics for Freedom*, Oxford University Press, 2012

16. Counter-intuitive though all this might seem, some such model is needed to make any sense of human or animal *agency* and, indeed, to explain much of what happens in the world. If our choices and actions are wholly determined by, and fully explainable in terms of, 'bottom up' processes operating at the molecular, atomic or sub-atomic levels then it is completely unclear how they can be regarded, in any meaningful sense, as *our* choices and actions. The philosopher Helen Steward argues along these lines in her recent book *A Metaphysics for Freedom* (2012). She supports a version of *libertarianism* which she calls '*Agency Incompatibilism*', maintaining that causal determinism – the belief that *everything* that happens, *including our own choices and actions*, is already causally determined to occur – is *incompatible* with the agency of humans and more complex non-human animals.[7] She argues that:

- "action, properly conceived as a type of input into the world that is essentially *by its agent*, an input which is such that it is genuinely up to the agent whether or not it occurs, is inconsistent with determinism;
- non-human animals above a certain level of complexity (as well as human beings) must be accounted agents;
- the cognitive systems by means of which we organise and conceptualise the world are already disposed to recognise this fact;
- determinism ought not to be thought of as a purely empirical thesis that only a scientist could ever have the right to deny, but rather as a metaphysical thesis, vulnerable to challenge on the grounds that are perfectly accessible to any of us".

17. There certainly appears to be something metaphysical about causal determinism in that its truth or falsity is *totally irrelevant* to how we conduct ourselves in the world. As the economist Joan Robinson argues: "The hallmark of a metaphysical proposition is that it is not capable of being tested. We cannot say in what respect the world would be different if it were not true. The world would be just the same except that we would be making different noises about it… It purports to say something about real life, but we can learn nothing from it".[8] Even the most convinced of causal determinists behave as if their choices and actions are *up to them* and *not* pre-determined by some causal chain going back to the Big Bang. When deciding, for example, what to choose from a restaurant menu, where to go on holiday or how to vote in an election they cannot, any more than anyone else, just sit back and wait for some pre-determined outcome to emerge all by itself. They have to *work* at making a decision, take *ownership* of it and accept *responsibility* for it.

18. A causal determinist on trial for murder might be tempted to disclaim responsibility for his actions on the grounds that they emanated from causal processes determining, since the dawn of time, all that happens to particles in fields of force including those constituting his own brain and body. The judge could respond in kind and suggest that the particles constituting both the jury and herself might be equally pre-determined to find the defendant guilty and sentence him to hang. More appropriately, she would point out that *agency*, and in particular *moral* agency, is something that can be attributed only to *complete* human beings, not to bits of them. We need to remember, however, that we *do*

[7] A handy diagram (see page 9) summarising divergent stances towards causal determinism is provided in: Thomas Pink, *Free Will: A Very Short Introduction*, Oxford University Press, 2004

[8] Joan Robinson, *Economic Philosophy*, Penguin Books, 1962

acknowledge the impact of factors that, if not entirely *determining* our behaviour, strongly push it in certain directions. We recognise the impact upon human behaviour of factors such as genetics, upbringing, drug addiction and mental impairment and, in the case of criminal behaviour, discriminate in our treatment of offenders on the basis of the degree to which it appears they understood what they were doing and could have chosen to act otherwise. This may determine whether they are detained in a prison or a mental institution.

19. The existentialist Jean-Paul Sartre recognised the impact of accumulated personal experience (or 'facticity' as he called it) upon human choice and action but argued that human *consciousness* has the power to *transcend* it. Essentially a Cartesian dualist, he saw consciousness as an 'uncaused cause', likening it to a "wind blowing from nowhere towards everything", and regarded failure to exercise it as a form of 'bad faith'. Although we may reject Sartre's dualist ontology, we do recognise the mental tension, when making choices, between conflicting thoughts, feelings, desires and habits. We are often pulled in different directions and what 'wins' on any occasion may vary – hence we do not always display consistency in our choices and actions. However, the more active our powers of *imagination* and *memory*, the more widely and freely can we explore and evaluate alternative possibilities and their implications and the more likely are we to behave coherently.

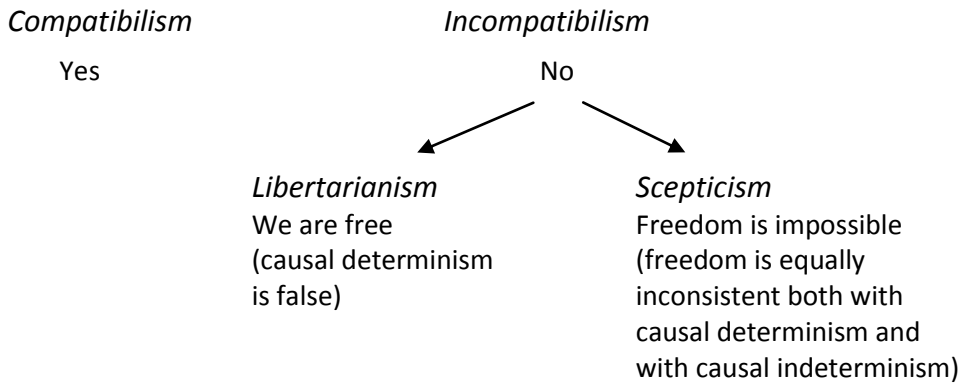
20. In conclusion, I would argue – as does the philosopher Julian Baggini in his book *Freedom Regained: The Possibility of Free Will* (2015) – that we only confuse ourselves by asking whether we do or don't have free will or whether we are or are not free in our choices and actions. The reality is, to borrow a term from statistics, that we possess '*degrees of freedom'*. The extent of our freedom varies widely depending upon a vast range of factors both internal to ourselves and in our external environment. Baggini makes the point that the fact that our choices and actions are bound to be influenced by our desires, beliefs, principles and personalities does not make them un-free. If they were *not* so influenced and thus in effect *random*, it is difficult to see how they could be regarded in any sense as *our* choices and actions. From a discussion with the artist Grayson Perry, Baggini draws some general conclusions about the nature of free will. "Thinking about the freedom of the artist should change how we see the free will of everyone. First of all, artists help us to understand that to be free is for your choices to flow from you, whether they are entirely conscious or not. Second, to be free is to be able to generate highly personal outputs from the inputs of nature, nurture and society, not to be free from their influences, able to create from nothing. Free choices are ones where the individual contributes something indispensible to the choice, even if the ability to make that contribution is something that is in one sense simply the result of nature and all past experience – for what else could it be the result of? Third, to be free is to make choices in the knowledge that there are other options and without being forced or coerced in one way or another. This can be the case even if, from a certain point of view, the choice you actually make is the only one you would ever have made in that situation."

Roger Jennings
September 2015

Divergent Positions Regarding Free Will and Causal Determinism

Free will: the main positions

Is freedom of action consistent with causal determinism i.e. with the belief that *everything* that happens, *including our own choices and actions*, is already causally determined to occur?



Source: Thomas Pink, *Free Will: A Very Short Introduction*, Oxford University Press, 2004

Some Afterthoughts

In the discussion following my presentation, mention was made of the early 1980s experiment by neurologist Benjamin Libet which some have claimed proves that human 'free will' does not exist. In Libet's experiment volunteers were asked to randomly tap a button. Libet detected activity in the prefrontal cortex of their brains (an area associated with decision-making) 200 milliseconds before they were *conscious* of deciding to do so. Subsequent studies have produced similar findings, the problem in all cases being how to *interpret* them.[9]

Apart from technical problems – relating, for example, to the *accuracy of timings* (especially of reported *awareness* of decisions to tap the button) and to the differentiation of *decision-making* from *other* types of brain activity – major *conceptual* issues arise. The interpretations of some neuroscientists appear conceptually confused and, indeed, metaphysical in nature. Bizarrely, Libet considered that in the 200 millisecond gap between decision and awareness of decision, his volunteers retained the freedom to *negate* the choice that their brains had already made i.e. that they possessed a sort of '*free won't*'. He thus assumed the existence of 'selves' which observe and can *cancel* (but for some reason not *originate*) decisions made independently by the brains to which they are attached. Clearly, we are in 'ghost in the machine' territory here – albeit pretty ineffectual ghosts.

[9] For an explanation of Libet-type experiments and an examination of their interpretation see: https://en.wikipedia.org/wiki/Neuroscience_of_free_will

The experience of 'selfhood', in its various forms, makes sense only as the *product*, along with other mental phenomena, of the *cognitive systems* (minds) realised within brains. Human choices, moreover, are *meaningful* only in terms of *system level* phenomena – *not* the lower level neurobiological processes through which they are realised. A 'top-down' causal relationship is implied. American psychologist Michael Gazzaniga argues that micro-level complex systems "self organise … into new structures, with new properties that previously did not exist, to form a new level of organisation at the macro level" and that "mental states that emerge from our neural actions do constrain the very brain activity that gave rise to them… Mental states such as beliefs, thoughts, and desires all arise from brain activity and in turn can and do influence our decisions to act one way or another."[10]

It is thus nonsense to talk of our *brains* making decisions of which our *selves*, characterised as ghost-like 'onlookers', then somehow become aware. Our choices flow from the workings of the *entire cognitive systems* comprising our minds. Such processes involve *varying* levels of consciousness. The fact that they may start, and even remain, at a subconscious level does not make the choices any the less those of the minds involved. Our *substantive* choices in life, of course, generally involve *conscious* thought processes and are *purposive* i.e. geared to the achievement of recognised ends – not inconsequential activity such as random pressings of a button.[11]

The *causal efficacy* of thought processes (including belief, desires and intentions) appears undeniable. Do we really believe that the words we utter at the Kingston Philosophy Café are *causally unrelated* to the thoughts we seek to express and that both the words and their associated vocalisations are *explainable* in terms of 'bottom-up' processes operating at neuronal, molecular, atomic and sub-atomic levels (which is not to deny that such processes are *involved*)? Do we really believe that how we voted (if we did) in the last general election was *caused by*, and *explainable in terms of*, not the content of thoughts in our *minds* but by neurobiological processes in our *brains*? Were we surprised, after the event, to discover how we had voted? Could all those who voted Hitler into power in Germany back in 1933 reasonably say "don't blame me or my mind, blame my brain and its neurobiology"?

Our conscious choices, and the actions that flow from them, involve highly complex patterns of mental activity that will be influenced by our *mental models* of the nature of stuff and things (including other sentient beings) and how they are likely to respond to *alternative inputs* on our part. An *imaginative* process that envisages the likely outcomes of identified possibilities is involved. The accuracy of the models will obviously affect the relevance and success of resulting choices and actions. If, for example, we believe that cholera is caused by 'bad air' or divine displeasure and choose, whilst continuing to drink polluted water, to wear face masks or pray to God, our actions will be irrelevant and we will continue to die.

Processes of *reasoning* based on models of 'how things work' are thus required if our choices and actions are to be relevant to the achievement of given ends. They are *inadequate*, however, to the *determination* of how we behave. Much philosophical discussion of 'free will' appears to presume the existence of *objective reasons* why we

[10] Michael Gazzaniga, *Who's in Charge: Free Will and the Science of the Brain*, Ecco, 2011

[11] Baggini (2015) points out that "Libet's experiments are very peculiar set-ups, and it is perhaps strange how quick people are to assume that they reveal anything at all about what real-life decision-making involves".

should behave in one way rather than another – although, paradoxically, to be bound by the *dictates* of reason would seem to *remove* our freedom of choice and action. The reality, of course, is that reasoning can help identify the likely outcomes of alternative behaviours but not determine our *feelings* about those outcomes and thus what we decide we *should* or *shouldn't* do. Famously, David Hume emphasised the crucial role of the 'passions' in moral choice – although arguably attributing too subordinate an accompanying role for reason when he wrote: "Reason, is, and ought only to be, the slave of the passions, and can never pretend to any other office than to serve and obey them"[12] It is the *combined* application of rational, emotional and aesthetic intelligence that enables us to identify 'rules of conduct' that we can apply consistently to ourselves and recommend to others.

If we examine any of our significant choices in life we are bound to recognise the impact of *competing* factors, both emotional and rational. As suggested in my presentation, what 'wins' on any occasion may vary. The more we have explored and thought about similar situations, however, the more likely are we to display *consistency* in our choices and actions. This does not make them less 'free' – it makes them more an expression of ourselves as moral agents and less likely to represent instant and arbitrary 'knee-jerk' reactions.[13]

The ability to *imagine* alternative possibilities and *evaluate* them in relation to *desired outcomes* is essential to making coherent choices. Anything that enhances such ability, therefore, expands our freedom of choice and action. Anything that constrains it, conversely, reduces that freedom. Oppressive regimes such as in North Korea, it should be noted, restrict freedom not only by punishing those who express dissent but through the control of information and the deliberate moulding of people's minds from infancy to make it harder for them to imagine how things might be both different and better. Arguably, the *religious indoctrination* of children by parents, clerics and schoolteachers (most 'faith' schools, controversially, being *publicly* funded) similarly constrains their development as free-thinking *moral agents* who make up their own minds about what they consider right or wrong and who take full responsibility for their choices and actions.[14]

Roger Jennings
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[12] David Hume, *A Treatise of Human Nature*, 1739 (Book II, Part III, Section III – *Of the Influencing Motives of the Will*)

[13] This does not rule out the possibility of our sometimes reacting on the spur of the moment or 'giving in to temptation'. Richard Hare examines issues relating to 'moral backsliding' in *Freedom and Reason*, OUP, 1963.

[14] Many religions, of course, stress the importance of *free will* and *personal* responsibility. The Catechism of the Catholic Church, for example, includes statements such as "Freedom is the power, rooted in reason and will, to act or not to act, to do this or that, and so to perform deliberate actions on one's own responsibility" and "Freedom characterizes properly human acts. It makes the human being responsible for acts of which he is the voluntary agent." The implication, however, is that *what* is right or wrong is determined not by us but by 'God' and that our freedom extends only to choosing whether or not to observe 'his' commands – as interpreted and taught by a self-selected, and generally male, priesthood.