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Can We Be Free-Willing Robots?

On the Possibility of Free Will in a Deterministic World

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The view that human beings do not exercise free will appears for many to be a consequence of a modern, scientific view of the universe and humankind's place in it. It is a view that is popular among humanists, atheists and other freethinkers. In this address, Leslie Allan endeavours to show how this myth is based on some fundamental errors of reasoning and an insufficient attention to how 'free will' language is used by ordinary folk. He garners ordinary usage and modern medical and legal practice to develop his '4C theory' of the requirements for acting freely in a world exclusively governed by physical, chemical and biological forces.

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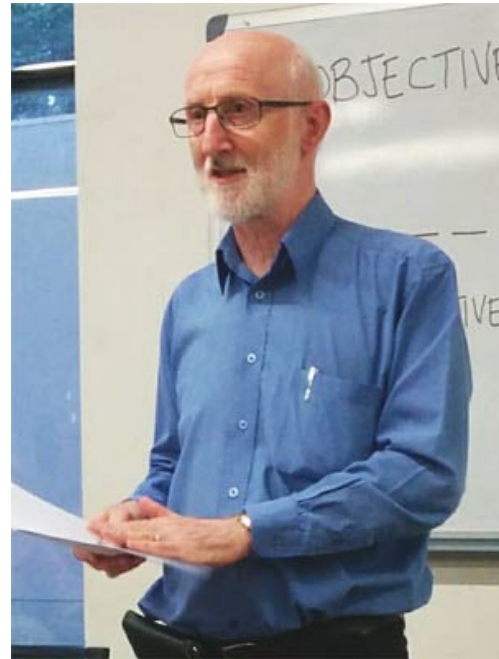
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1. Introduction

For those who don't know my history, let me say a little about my background. I took an interest in the various sciences from a very early age. My first interest was astronomy. I was fascinated by stars, galaxies, supernovae and planets, as many young people are. My interest then progressed to chemistry, as I wondered about how a small number of elements combined to make the multitude of materials we see. My next interest, in electronics, became my first career. At the Institute where I was studying electronics, I often got into debates on the big questions of life with a very religious colleague of mine. I remember him always ending the conversation with the advice that I should read so-and-so. My interest in philosophy was so piqued that I studied philosophy and history formally at La Trobe University throughout the 1980s. My main study interests were in two key fields. The first was ethics and religion. The second area of study was epistemology, especially the sub-discipline of the history and philosophy of science.



Presenter: Leslie Allan

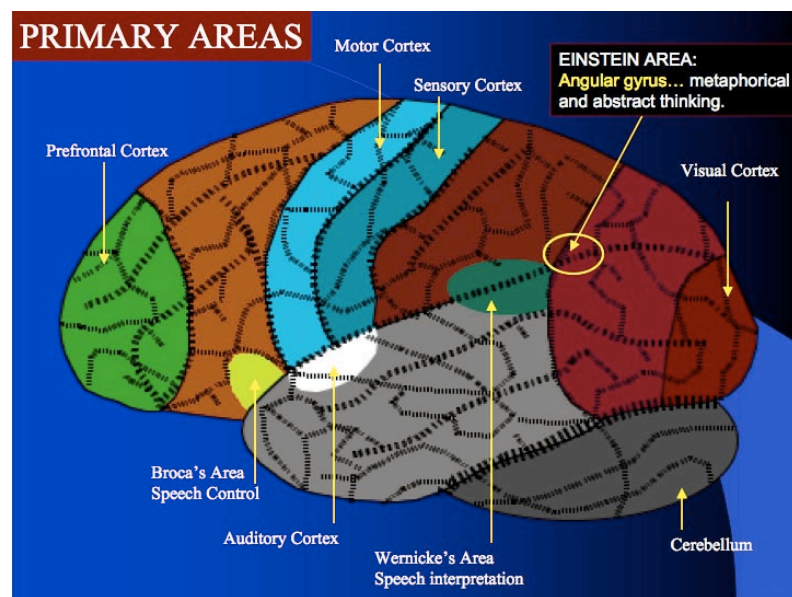
In the meantime, I was also working full time. I eventually migrated away from an electronics career and focused on training and organizational development. In 2003, my partner and I set up our own company, developing products and servicing businesses. A couple of years ago, I mostly retired. Now that my business responsibilities have diminished substantially, I'm able to devote time to my primary loves; science and philosophy. Much of my time is now absorbed in contributing to my local secular humanist chapter, the [Humanist Society of Victoria](#). I currently manage the web site and social media presence. I'm also busy publishing essays to my [Rational Realm](#) web site and short videos to the Rational Realm [YouTube](#) channel.

You may be wondering how this talk came about. When I was studying at University back in the 1980s, I subscribed to a view called 'hard determinism'. I'll explain in a moment what that view entails. One tenet of that view is that human beings never exercise 'free will'. At the time, I believed that is what a scientific understanding of the universe and our place in it leads a rational person to believe. As I progressed beyond first year studies, I got to appreciate that the hard questions in philosophy are hard for a reason. I came to appreciate nuances in the debate that had escaped me in my novice years. Now that I'm mostly retired, I spend a fair amount of time engaging with fellow naturalists, humanists and atheists. Seeing many of them fall into the same traps that I did as a novice prompted me to write a defense of free will from a determinist's perspective. This talk is based on an essay I wrote in mid-2016 titled [Free Will and Compatibilism](#). You can find the reference to my essay and to other pertinent references on free will in the final section of this transcript.

2. The Free Will – Determinism Landscape

Before I outline what I'll be talking about tonight, for those who are new to the debate, let me give you a quick rundown on terminology. This helicopter view of the landscape will help you make sense of how the various approaches to the question of free will differ. The modern scientific view of the world paints human beings as an integral part of nature. This view sees us as part of the natural universe, subject to the same physical, chemical and biological forces as other entities in the universe. Our hopes, desires, beliefs and values all have a biological basis that can be explained using physical models and natural laws. What can be explained includes our volition; our choosing to act one way rather than another.

Say we decide to read out the word 'cat' from a book. Look at the diagram to the right of a normal person's brain. Neuroscience tells us that we recognize the word in our visual cortex. That recognition is transformed into an auditory impulse in the angular gyrus. Wernicke's area then interprets the auditory code. Next, Broca's area prepares and controls the motor cortex for speech. Finally, the motor cortex activates the many speech muscles in our mouth and tongue. What is not shown in this diagram is that other parts of the frontal lobe, housing Broca's area and the motor cortex, are involved in our first forming the intention to speak.



Functional Regions of the Human Brain
(Reprinted with permission from Webber Source)



Artists Impression of Neurons in the Brain

All of this information processing occurs at the level of neurons, pictured in the image on the left. There are some 80 billion neurons in a normal adult brain, with some 100 trillion connections between them. Each connection is made using very small electrical impulses moving along axons and dendrites. One neuron can have literally thousands of connections to other neurons. This electrical activity is further regulated by neurotransmitters acting in the brain. Two such chemical messengers are Serotonin and Dopamine. The point here is that according to neuroscience, all of this activity happens strictly according to the laws of physics.

The upshot is that all human behaviours, voluntary and non-voluntary, are determined by physical forces. Hence the term ‘Determinism’ to denote this view of the universe and our place in it. This view, that all events in the universe, including our own behaviours, is determined by prior states of the universe coupled with immutable physical laws is often referred to as ‘causal closure’.

The opposing view, that there are some activities in the brain that are not caused by prior physical events, or not *completely* caused by prior physical events, is called ‘Indeterminism’. This view allows that some human behaviours, such as choosing to read the word ‘cat’, are not completely caused by physical forces. This account is called a ‘contra-causal’ view because it is ‘contra’/against a complete physical explanation of human decision-making. This lack of a complete physical explanation could be because of quantum fluctuations in some neuronal activity or because there exist non-material minds or souls that act on some key neurons involved in human decision-making. In the handout, you’ll see a reference to an article by Randolph Clarke and Justin Capes that gives an excellent overview of the various types of indeterminism. [[Incompatibilist \(Nondeterministic\) Theories of Free Will](#), *The Stanford Encyclopedia of Philosophy*, Spring 2017]

Determinists and indeterminists can jump one of two ways when it comes to the question of whether human beings possess free will. The diagram below maps out the territory of possibilities. Note the two axes. The vertical axis indicates acceptance or not of the thesis of determinism. The horizontal axis indicates acceptance or not of human beings exercising free will, at least some of the time.

Take the determinists first. They could argue that determinism precludes us having free will – No free will. In that case, they are ‘hard determinists’. Those that argue that determinism does *not* preclude free will are labelled ‘soft determinists’. Today, they are more commonly called ‘compatibilists’, for the simple reason that they claim that the thesis of determinism is compatible with us having free will. A common misconception is that soft determinists/compatibilists don’t fully accept the thesis of determinism, at least for the sake of argument. That is not the case.

Now consider the indeterminists. ‘Libertarians’ are those who argue that a necessary condition for free will (Yes) is that *not* all human behaviour is completely down to physical states and forces (No). The ‘hard incompatibilists’, on the other hand, argue that even if some human behaviours are not fully caused by physical forces (No), free will remains an impossibility (No).

		Free Will	
		No	Yes
Determinism	Yes	Hard Determinism	Soft Determinism (Compatibilism)
	No	Hard Incompatibilism	Libertarianism

Think for a moment about which of these four quadrants your own view on free will and determinism is located. Think first about where you sit on the Determinism axis: Yes or No for determinism? Then think about where you sit on the Free Will axis: No or Yes for free will? The intersection between your two answers locates your position.

For example, if you think that all of our actions are determined and, for that reason, you think we don't have free will, you are in the 'Hard Determinism' quadrant. On the other hand, if you think the truth of determinism does not prevent us from acting freely, you are in the 'Compatibilism' camp. If you regard human beings as lacking the capacity for free will irrespective of whether all of our actions are determined or not, you are in the 'Hard Incompatibilism' quadrant. Finally, if you feel that we can and do act freely and, for that reason, determinism cannot possibly be true, you are in the 'Libertarian' quadrant.

3. Why Does the Question of Free Will Matter?

If you think we don't have free will for one reason or another, tonight, I want to present to you some basic reasons for why we in fact do. If you subscribe to determinism and think on that basis we could not have done other than we do, I hope to show you that free will and determinism are not incompatible. If you are a libertarian and think that the fact that we have free will is a reason for rejecting the determinist's thesis, my talk tonight will attempt to show you that is not a good reason for rejecting determinism. I'm not going to argue for the truth of determinism tonight. That is not my aim. I will just say parenthetically that the truth for determinism, at least at the macro level of human beings, is evidenced from a number of areas of study. These include physics (e.g., Principle of conservation of energy), neuroscience, pharmacology, evolutionary biology, developmental psychology, artificial intelligence and, should I say it, the philosophy of metaphysics.

Why is this question of free will important anyway? Isn't it just an intellectual word game played by philosophers with nothing better to do? Well, one significant impact is on how people see the justifiability of moral judgments. Many scientifically-minded determinists think that once we get over the illusion of free will, we will see that we also need to ditch the concept of moral responsibility. And this has impacts on how we praise and blame people for their actions, how we treat people in law courts and how we punish people in our penal systems. These hard determinists also want to bring about a wholesale change in the way we talk. They want us to give up what we take today as quite ordinary talk. Take a rather everyday, mundane expression, such as, 'I got a free choice on what uniform I wear to work'. Well, for these hard determinist language reformers, that's out the window.

4. Aim of This Talk

I'm not going to talk about these implications for how we view moral responsibility tonight. That is a big subject in itself. What I do find, though, is that many of the arguments against free will and moral responsibility are based on some fundamental philosophical mistakes. Many people get a big headache when they see philosophers debating free will. Tonight, I'm going to keep it simple. Tonight, I want to present to you a different way of looking at the question; a way that will challenge you while bringing simplicity and clarity. The approach I will use is called an 'ordinary language' analysis. This approach investigates what we mean by 'free will', and whether we have it or not, by looking at how ordinary folk talk about free will.

This approach is a strong antidote to the effort by hard determinists and libertarians to convince us that when ordinary folk talk of acting freely, they are referring to an undetermined or underdetermined will; that is, a contra-causal will. I will try to show you that hard determinists and libertarians are overlaying our ordinary, everyday language with their own metaphysical presuppositions. I will try to show that our ordinary 'free will' talk is metaphysically neutral. What I mean by that is that when Joe says, for example, that he freely gave up his seat on the bus, that his expression is *agnostic* about whether or not his brain states were completely determined by prior physical events.

So, tonight, I will present my case by:

- first looking briefly at the etymology and lexicography of the term, 'free will'.
- Next, I'll work through a number of examples illustrating the four kinds of situations that ordinary folk and working professionals consider limit our exercise of free will.
- Then, I'll review what are called 'paradigm cases' of people exercising their 'free will' and how the word 'free' modifies other words.
- Next, I'll roll up all of these learnings into a coherent theory about the four necessary requirements for an agent to choose freely. I'll call this the '4C theory'.
- Free will skeptics deny our ability to do other than we in fact do. This skepticism impacts a range of ethical questions about how we ought to treat others. I will venture a brief, non-technical look at an answer to this question about whether we could have done otherwise.
- I will then end on a magical note about the supposed free will illusion.

The journey I will take you on here is just a snapshot of the longer journey presented in my essay, [Free Will and Compatibilism](#).

5. Coercion

OK. Let's get started with some basic etymology. The term 'free' arose from the Old English word 'freo' in the thirteenth century. This word meant:

free, exempt from, not in bondage

[see 'free' in [Collins English Dictionary](#) and [Online Etymology Dictionary](#)]

Between the years 1525 and 1535, the conjoined term 'free will' arose for the first time. In the literature of the day and in the ensuing decades, the term was used to denote a person's will that was not constrained or forced [see 'free will' in [Wiktionary](#)]. From its earliest uses, it meant an unencumbered and uncoerced will.

Take, for example, Shakespeare's *Antony and Cleopatra* [c. 1606]. Octavia pleads to Caesar that he travelled to Rome of his own free will in spite of the constraints put on him by Mark Antony. As Octavia puts it:

'Good my Lord, To come thus was I not constrain'd, but did it On my free-will'
[3.6.65].

Here is another example from the 17th Century. In Charles Dickens' *Nicholas Nickleby*, Nicholas begs the young Madelaine to not marry Mr. Gride as she is unknowingly being impelled to do so. Madelaine protests:

'I am impelled to this course by no one, but follow it of my own free-will. You see I am not constrained or forced by menace and intimidation'

[*The Life and Adventures of Nicholas Nickleby*, vol. 2, 1843: 313f]

As you can see from these early uses, a free will is contrasted with a constrained or forced will. It is *not* contrasted with a caused will. The constraints identified by these characters are constraints put up by other people and *not* causes lurking in heritable characteristics or brain physiology, as hard determinists and libertarians want us to believe.

This idea that absence of coercion is central to the notion of 'free will' carries through to modern day. The *Collins English Dictionary* renders one of the two meanings of 'free will' as:

the ability to make a choice without coercion: [It then gives an example in use.]
he left of his own free will: I did not influence him

Similarly, the *Webster's Revised Unabridged Dictionary* gives the first of two meanings to 'free will' as:

A will free from improper coercion or restraint. [It also gives an example in use.]
"To come thus was I not constrained, but did On my free will."

So, I want to conclude here that absence of coercion is a central requirement for an act to be considered 'free'. In my essay, [Free Will and Compatibilism](#), you can read three modern day examples of ordinary use that further illustrate this point.

Now, with modern advances in science and jurisprudence, lay and professional folk have come to appreciate that a person's will can also be encumbered or restricted in other situations. In addition to coercion, these other kinds of situations in which a person's capacity to exercise their free will is restricted are these: manipulation, addiction and mental illness. It is to each of these that I now want to turn.

6. Manipulation

When you are coerced into doing something you don't want to do, you feel real psychological pressure. Imagine someone holding a gun to your head. On the other hand, when we are robbed of our free will through manipulation, we *don't* feel this pressure personally. Yet the person on the street also regards manipulation as a means of robbing a person of their freedom to choose. In both cases, though, the basic notion remains the same: an unfree will is an encumbered will. Manipulation is a direct means of mind control and includes hypnosis, brainwashing, brain implants and zombie drugs. Here are a couple of examples of how non-philosophers and non-theologians regard free will in these cases.

1. Yeonmi Park fled Kim Jong-il's North Korea with her parents. She claimed she was brainwashed by the regime with the result that 'I had not been a real person – I was created for the regime to work for them. If they ordered us to die, I would've died for them. I wasn't a human – I was something else.' After escaping and educating herself, she said, 'I now have free will' [[Comment: I Was Brainwashed to Believe Kim Jong-Il Was a God](#), SBS, 2014].

As this example illustrates, brainwashing robs a person of their free will through replacing their personal identity, their character, with another. Central also is the idea that this manipulation is done deliberately by another agent. Once again, the philosopher's and theologian's notion of contra-causality seems inconsequential.

2. This theme of third-party control and loss of character appears also with judgments about brain implants. Although mind control through brain implants is still very much the preserve of science fiction, some believe it is happening now. Dave Hodges [[Government Sponsored Mind Control Will Soon Eliminate All Free Will](#), 2015] writes that the government's aim in microchipping every citizen is 'the complete control of every individual through mind control' and 'to control all thought, all emotion and consequently, all behavior. The end result will be to remove all potential opposition (i.e. free will).' The interesting thing here is that for Dave Hodges, we all currently possess free will *even though* our minds are strictly subject to causal laws. The tipping factor for this writer is third-party control and *not* determinism.

7. Addiction

For the ordinary person on the street, as well as for medical and legal experts, many addictions are seen as compromising a person's ability to choose freely. These psychological compulsions that inhibit the exercise of free will include alcohol, substance, work and gambling addictions. Examples are addiction to sex, hoarding, kleptomania and pyromania. Let's look at drug addiction as an example.

Dr. Alan Leshner is director of the National Institute on Drug Abuse in the United States. He was asked in an interview about the drug addict's lack of choice and what this means for free will. First, he emphasized that one's 'brain is constantly changing as a function of the experiences one has'. However, if you're an addict, he explains:

You're in a state where the drug has totally taken over your being. . . . So, there's something about these biological changes that are going on at the cellular level that gets translated into compulsive, uncontrollable drug use on the behavioral level.

[[An Interview with Alan I. Leshner, Ph.D.](#), *Moyers on Addiction*, Moyers, 1998]

So, for Dr. Leshner, free will is *not* about having some of one's brain states form independently of one's genetic constitution and environment. It's about being free of psychological compulsion and being true to one's character; to one's being.

Next, consider what happens in the court room. According to the Law Library, a judge will only allow an accused person to enter a guilty plea if they consider that the accused 'exercised free will'. The guilty plea is not accepted if the 'defendant isn't mentally competent at the time he agrees to the plea, for example, due to a developmental disability, intoxication or influence of narcotics'. Here, the ability to reason about one's actions figures prominently in the consideration of whether the act is free. The accused must be able to understand the court proceedings and 'consult with his lawyer with a reasonable degree of rational understanding' [[Guilty Plea: Accepting the Plea - The Elements of Guilty Pleas](#), Law Library, 2016].

I discuss this in greater depth and draw upon more real-life examples in my essay, [Free Will and Compatibilism](#). What these examples demonstrate, though, is that both the common person and the medical and legal professional alike link the loss of free will in cases of addiction to feelings of *compulsion*, loss of *personal identity* and *reasoning ability*. The hard determinist's and libertarian's notion of contra-causality is notably absent from these considerations.

8. Mental Illness

The fourth kind of situation that can limit the ability to choose freely is mental illness. This occurs where the mental illness constrains a person's mental capacity to reason and regulate their behaviour, either because of genetic history, accident or disease. Here are a couple of examples in which ordinary folk talk about how a mental illness robbed a person of free will.

1. June experienced hallucinations that commanded her to commit various acts. She wrote:

I find that it is like my free will has been removed and have no alternative but, to obey.

[[Symptoms of Schizoid Personality Disorder](#), Nemade, 2009]

She also linked this feeling of compulsion to the feeling that the voice inside her head 'keeps me from being myself'.

2. In this second example, Herschel Hardin is the father of a child with schizophrenia. He lamented that the illness deprived all those affected by the illness of the capacity for free will by robbing them of rationality and autonomy. As he put it:

Their personalities are subsumed by their distorted thoughts

[[Uncivil Liberties](#), Hardin, 1993]

As these examples show once again, the common themes in the ordinary person's way of thinking about free will are that the exercise of free will requires that a *person's character is intact* and that they can *reason*.

I want to talk for a moment about mental illness and the insanity defense. The insanity defense has a long history in jurisprudence. In many legal jurisdictions, the defense applies when it is judged that the accused is dispossessed of their free will. Experts for the defense must testify that the accused is either cognitively incompetent, unable to comprehend the nature of the act and to reason about it, or volitionally incompetent, unable to control their impulses.

What's important to note here is that expert witness for the prosecution is *never* called upon to demonstrate that the causes of the defendant's transgression were themselves uncaused activities in the brain. Contrary to what the libertarian says, contra-causal brain activity is *not* required to be proved in a court for the insanity defense to be challenged. For an example of how the absence of free will in the mentally incapacitated works in a legal defense, please refer to the case of [Colorado v. Connelly](#) [1986] in my essay. There, you will also find reference to a useful history and critical review of the insanity defense by Julie Grachek [[The Insanity Defense in the Twenty-First Century](#), *Indiana Law Journal*, 2006].

9. Paradigmatic Examples of 'Free Will'

The examples of restrictions on free will that I have given so far are not exhaustive. However, they do represent the way ordinary folk think and talk about free will. If you are still skeptical, I encourage you to get into discussion groups, offline or online, and listen to or read comments from contributors on the freedom-restricting circumstances I've highlighted. In ordinary people's minds, what limits free will is *not* causality, but coercion, manipulation, addiction and mental illness. This way of thinking has only been further elaborated and refined by modern developments in psychiatric practice and jurisprudence.

Another way to illustrate my point is by looking at paradigmatic uses of the term 'free will' in common discourse. Imagine you're waiting in your local supermarket queue and you overhear this question asked in a conversation about a recent marriage:

Mary asks Anisha: 'Did you marry Sanjay of your own free will?'

My question to you is: If Anisha did *not* marry Sanjay of her own free will, what evidence would you be listening for in Anisha's answer?

[Did you listen for evidence of coercion, such as: 'My entire family would have abandoned me and I would have been evicted and left with no money'?]

My next question to you now is: If Anisha *did* marry Sanjay of her own free will, again, what evidence would you be listening for in Anisha's answer?

[Did you listen for evidence of the absence of coercion, such as: 'Yes. We fell in love at university and my parents had no objections'?]

How many of you were thinking of and looking for evidence about the neurophysiological state of Anisha's brain? Who was waiting for Anisha to start talking about her motor cortex and whether there were sufficient physical causes firing her neurons?

This reminds me of a joke I heard the other day:

A young couple came into the church office to fill out a pre-marriage questionnaire form. The young man had never talked to a pastor before and so was quite nervous. The pastor saw this and tried to put him at ease. When they came to the question, 'Are you entering this marriage of your own free will?' there was a long pause. Finally, the girl looked over at the apprehensive young man and said, 'Put down yes.'

The lesson here is that questions about whether a person chose freely are practical questions, rooted in people's day-to-day lives. Hard determinists, in particular, have taken our modern, scientific understanding of the brain and overlaid this causal model onto what they think common language terms, such as 'free will', mean. Scientists, such as Sam Harris, have also fallen into this trap of injecting their metaphysical understanding of the world into what they think is the common person's use of ordinary language terms.

The absurdity of this kind of approach is also evident from looking at other paradigmatic instances of the use of 'free'. The term, 'free', is used as a modifier with a number of other nouns. Consider these examples.

When we speak of a 'free range' chicken, we are *not* meaning a chicken whose movements are contra-causal. We are not meaning that the chicken moves in a way that breaks the laws of deterministic physics. We mean that the chicken's movements are not constricted by being housed in a cage or enclosed barn.

Take the term 'free thought'. When we advocate the right of 'free thought' in society, we are upholding the right to thought and expression that is free from government, religious and other institutional restrictions. We are *not* referring to thought that is contra-causal.

Similarly, a drawing done 'free hand' does *not* mean a drawing that broke the laws of physics during its creation. It's a drawing that is created free from the constraints of instruments, templates and guides. There are many other examples that illustrate the same point, including 'free vote', 'free fall' and 'free enterprise'. You can see the pattern here.

The ordinary-language critique I'm advancing here tonight can be extended to judicial language and thinking. Throughout the modern history of jurisprudence, in determining whether a defendant was absent of the capacity for free will at the time of the crime, no jury or judge has requested or called in expert witnesses to attest to the fact that at the time of the crime the defendant's relevant brain states transitioned from a physically contra-causal state to a causal state. This is not surprising as no dualist theory of mind and body has delivered on the promise. No metaphysician yet has presented evidence for how and when particular neuron firings in a person's brain gets removed from the chains of causation to which neighbouring neurons belong. The same is the case for indeterminists advocating random quantum effects in the brain.

In fact, judges examine, and juries are asked to consider, whether there were any circumstances that either eliminated or mitigated the defendant's ability to choose freely. The types of circumstances that the judge and jury consider include precisely those types of encumbrances I outlined: coercion or manipulation by a third party, drug addiction and mental illness. These are precisely the impediments to free will to which the compatibilist points. If you want to find out more about how judicial defenses work, please see my essay where I have included a reference for an excellent systematic summary by Paul Robinson [[Criminal Law Defenses: A Systematic Analysis](#), *Columbia Law Review*, 1982].

Some hard determinists and libertarians have objected to this 'ordinary language' account of free will by pointing to a series of psychological studies that examine how the person on the street actually thinks. These surveys, they argue, demonstrate that ordinary folk mean 'free will' in the contra-causal sense. However, when you actually look at these studies, on balance, the better designed studies show the opposite; that people's use is agnostic to the question of contra-causality. I've written a critical review of some of these studies and drawn some conclusions. My review is titled, [Psychological Research on Free Will Intuitions: A Critical Review](#).

10. Four Necessary Conditions for Free Will

So far, I've crystallized the four types of situational impediments to the exercise of free will: 1. coercion, 2. manipulation, 3. addiction and 4. mental illness. What is it about these situations that minimize a person's capacity to act freely? In the examples I discussed, four requirements for 'free will' seemed to recur throughout. For brevity, I've called this compatibilist account of the requirements for free will the '4C theory'. These 4Cs are:

1. Compulsion
2. Control
3. Character
4. Cognition

I want now to describe briefly each of these requirements.

(1) This first requirement, **Compulsion**, is that the act not feel compelled by the agent's situation. The feeling of compulsion I am referring to here is an introspective psychological experience. Here, the agent feels that they will sacrifice something of great value to them if they do not act in a particular way. The agent feels that they had no choice but to act as they did.

(2) The second requirement, **Control**, is that the act not be controlled by a third party. Unlike in the case of compulsion, the agent does not feel as if they are being compelled by circumstance. However, with their actions being manipulated either directly or indirectly by a third party, they have lost their autonomy. This requirement goes to the heart of what it is to be a moral agent with responsibility for one's actions. When control of a person's behaviour is surrendered to another moral agent, the locus of responsibility moves along that line of control to the third-party agent in control of the human puppet's behaviour.

(3) The third requirement, **Character**, is that the action is consonant with and a consequence of the agent's character. When the agent's behaviour is out of character, the person is not a *bona fide* agent of their own actions. This requirement often acts in tandem with the second requirement, lack of third-party control, as a marker of personhood.

(4) The fourth requirement, **Cognition**, is that the agent has the cognitive capability to offer reasons for their action and to deliberate about alternative courses of action. Without rational agency, the person is not exercising autonomy and is better described as a passive repository of impulses.

Each of these four requirements is necessary for a choice to be considered free. Even if one of them is missing, the agent has lost their capacity for free action. What ties all four requirements together is the fundamental axiom I expressed early on in this talk; that a free will is an unencumbered will. With the advent of scientific knowledge and modern technology, this basic understanding of encumbrance as compulsion has been supplemented with these additional requirements for moral and rational autonomy.

What seems clear is that philosophical and legal thought over the last century or so has largely coalesced around the view—and this is really the crux of the ‘4C theory’—that freedom of the will is a characteristic of an *autonomous, conscious agent* who can *reason and deliberate* about alternative courses of action. The thinking here is that such a person is constituted by their character and that within the bounds of this character, the agent faces a range of options on how to act in a given situation. When this range is encumbered or restricted by either subverting the person’s character or compromising their capacity for rational deliberation and action, the person’s freedom is diminished.

11. Free Will and ‘Could Have Done Otherwise’

In this section of my talk, I want to say something briefly about how we could have acted otherwise even when, in principle, all of our actions can be predicted with certainty. If God or Laplace’s demon [Pierre-Simon Laplace was a groundbreaking mathematician during the Enlightenment] or a supercomputer had a complete understanding of a previous state of the universe and the physical laws that govern it, it would have been able to predict with absolute certainty that I was going to say ‘absolute certainty’ just now. How could I have done other than say what I just said? Moral philosophers have a deep interest in this question as most take it as axiomatic that if it is the case that I *ought* to do have done something else, then it must be the case that I *could have done* that other thing. Our answer also impacts how we hold other people morally responsible for their actions.

Now, the hard determinists and libertarians, the incompatibilists, say that in a deterministic universe, we could not have done other than we did. Compatibilists like me say that we could have.

The philosophical arguments on both sides of the debate get very complicated. You can read the technical details of my solution in Section 7 of my essay, [Free Will and Compatibilism](#). Here, I want to give you the layperson’s answer. Let me ask you a question.

How many of you have a kitchen knife at home that is able to cut bread? This is not a trick question.

My next question is: What is that knife doing now, right this minute?

While it’s sitting in your drawer at home doing nothing, does it have the ability to cut bread? [You answered Yes to my first question, so the answer must be Yes.]

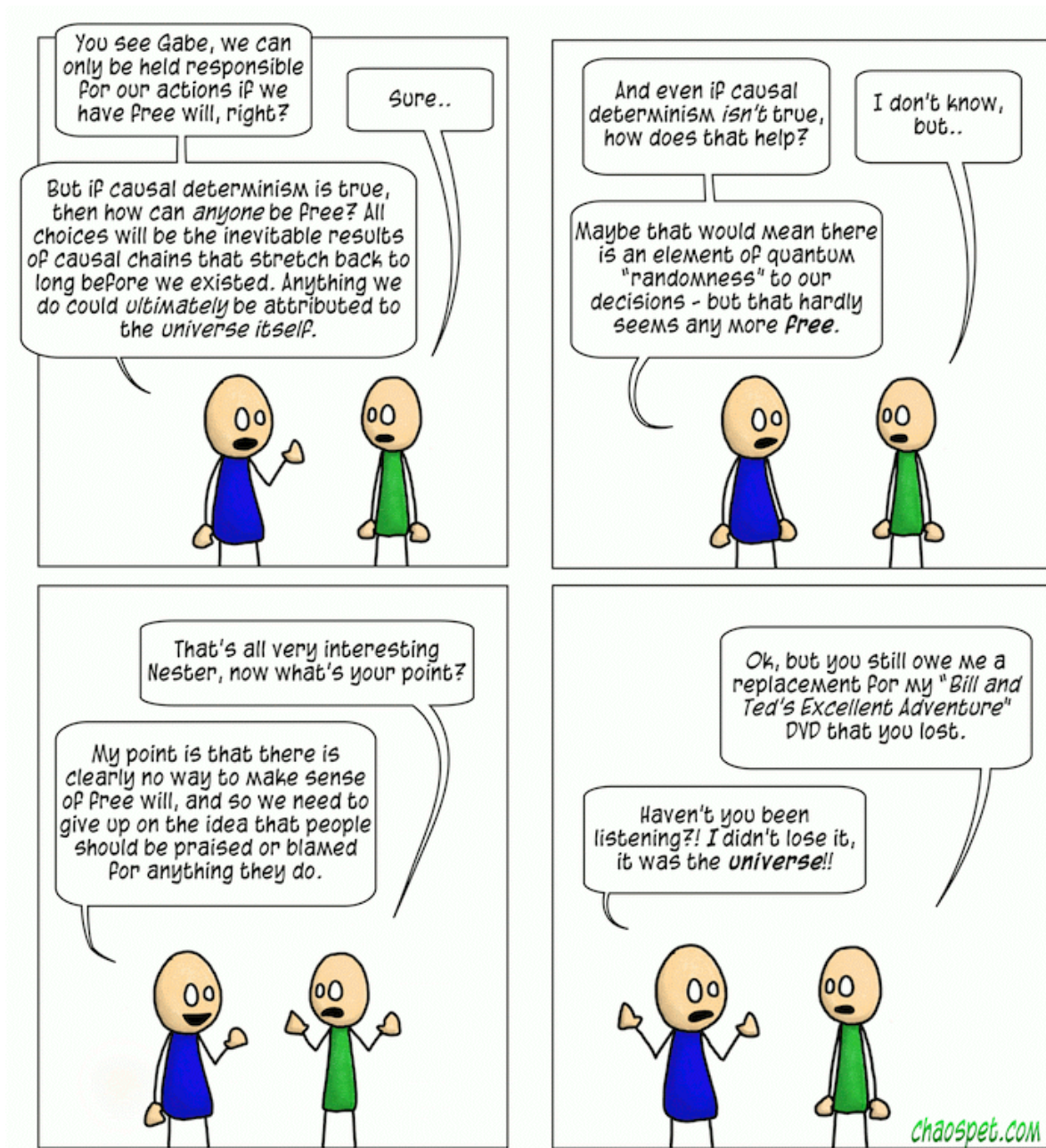
So, the conclusion here is that even though your knife is not cutting bread right now, it could have cut bread. [Analysis: To say X is able to do Y is to say that X can do Y in a variety of circumstances.]

Think about it. God or Laplace’s demon or a supercomputer would have predicted that your knife was not cutting bread right this minute. BUT, it still had the ability to cut bread even when it was not cutting bread. It could have cut bread even when, in fact, it was laying idle in your drawer.

Well, if a knife acting in accordance with deterministic laws is still able to cut bread when it is not, in fact, cutting bread, then why aren’t deterministic human beings able to do other than they in fact do? That’s the \$64,000 question for hard determinists and libertarians.

Now, what gives knives, motor cars, electric fans and human beings the power, the capacity, the ability, the capability to do things other than they in fact do? The short answer is that this ability derives from the intrinsic properties/the characteristics of the entity. In the case of your knife, these characteristics are its physical profile, like the hardness and sharpness of its blade. Likewise, in the case of human beings, these characteristics include a person’s psychological profile. Now knives, motor cars, electric fans and human beings

maintain their capabilities even when external circumstances change. Your knife continues to be able to cut bread, in virtue of its intrinsic properties, even when it is not actually cutting bread. Likewise, I maintained the ability to say something *other* than 'absolute certainty' before, even though that is what I, in fact, said. That's all I want to say on our ability to do other than we did. If you would like to follow this up, please read Section 7 of my essay and drop me an email.



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12. Intuition of Free Will

I want to end on a magical note. Libertarians say that we have a strong intuition, a compelling feeling, that when we act freely, we act contra-causally. Hard determinists go along with this idea that we have this feeling of contra-causality when we act. But, the hard determinists say, it's all an illusion.

For example, the libertarian philosopher, Timothy O'Connor, puts our ordinary experience like this:

The decision I make is no mere vector sum of internal and external forces acting upon me during the process of deliberation (if, indeed, I deliberate at all). Rather, I bring it about—directly, you might say—in response to the various considerations: I am the source of my own activity, not merely in a relative sense as the most proximate and salient locus of an unbroken chain of causal transactions leading up to this event, but fundamentally, in a way not prefigured by what has gone before. Or, again, so it seems.

[Agent Causation, *Agents, Causes, and Events: Essays on Indeterminism and Free Will*, 1995: 173]

I propose that both the libertarian and the hard determinist are mistaken here. Ask yourself, 'What is it to have an illusion of something?' An illusion is a perception that represents what you perceive in a way different from the way it is in reality. The vanishing ball illusion is a great example of a perceptual illusion. The magician throws a small ball twice into the air. On the third throw, he makes the hand motion, but hides the ball in his closed fist. We perceive the ball to be flying up into the air, only to vanish in thin air a moment later.

Now, for someone to say that they experienced the illusion of seeing the ball in the air, they must know what it's like to *really* see the ball in the air. Otherwise, how would they know it was an illusion of a ball in the air they experienced? Compare this situation with the hard determinist claiming that we experience the *illusion* of a contra-causal will. Do we really know what it's like to experience a contra-causal will; the real deal? On the hard determinists own thesis, that's an impossibility. So, without knowing what the real thing feels like, the hard determinist can hardly claim that we are experiencing an illusion of the real thing; an illusion of a contra-causal will.

What does this mean for 'free will' talk? If no one has ever experienced genuine contra-causal free will or its illusion, then the opportunity or impetus for people to talk about their experience of contra-causal free will would not have arisen. Just as if no one had ever experienced a real ball or its illusion, no one would be talking about their experience of balls. The upshot here is that if free will is not the psychological illusion that hard determinists claim it is, then this cannot be a reason for denying that we possess free will.

Libertarians, on the other hand, claim that they *really* directly perceive contra-causal will. But how can they have this perception? How is it that they directly perceive some of their decisions as resulting from neural firings in the brain that are not completely physically caused? Imagine that you are at your friend's house. She offers you tea or coffee. Sure, you

don't feel any kind of physical impulse forcing your finger to point to the tea or coffee. You would be the first to know if there were such a force acting on your finger. Furthermore, you don't feel any kind of impulse forcing neurons in your brain to adopt particular action potentials. But notice the queerness of the latter kind of feeling. Feelings of your finger being forced are natural and we all know what that feels like. However, what would it feel like to have particular neurons in your brain forced into particular states by physical forces? At this very moment, there are billions of neurons in your brain that are having their states determined by the action potentials of other neurons. With these neurons, though, you don't get to feel what it feels like to have these neurons fire in a completely deterministic fashion. What happens at the bio-chemical level under your skull is opaque to your conscious awareness.

This is not just a theoretical exercise. The way your eyelids blink is an instructive example here. One way they blink is spontaneously. They do this every few seconds and without your conscious awareness most of the time. This automatic blinking is triggered by activity in the pre-motor brain stem. The other way they blink is when you make a conscious, voluntary decision to make them blink. Now, between these two ways of blinking, automatic and freely willed, you don't notice any difference in feeling in how your neurons are firing in your brain. However hard you try, you can't discern through introspection that the automatic blinks are completely caused while the latter are not.

What we can conclude from this introspective psychological reflection about which kinds of states we can have a feeling about and which we can't is that the hard determinists give away too much to the libertarians. The 'illusion' of contra-causal free will that the hard determinists refer to is an illusion itself. It is a chimera that only serves to confuse the debate. We, in fact, do not have an 'illusion' of contra-causal free will because it's not the kind of thing that we can have an illusion about. If our feeling of free will is not a feeling of contra-causal willing, then what is it? As I've suggested throughout this talk, it's the 'feeling' of the absence of compulsion. The feeling of free will, then, is not so much a positive feeling. It is the absence of a feeling. Just as being 'pain-free' is not a feeling. Being 'pain-free' is simply the absence of the feeling of pain.

13. Conclusion

Before I wrap up this talk, think for a moment about how your views about free will may have changed since I started talking. Did you move at all towards to the 'free will' side of the landscape diagram with the four quadrants that I showed earlier? Or did you move away from the 'free will' side? Which quadrant did you place yourself in at the start of the talk? Which quadrant are you in now? Perhaps in question time, you could share your reasons for shifting in your view.

OK. To wrap up this talk, let me summarize what I've tried to show.

- I began by taking a helicopter view of what the free will–determinism debate is about, its key terms and its importance for questions about the nature of moral responsibility.
- I traced briefly the origin of the term 'free will' and how historical usage and today's major dictionaries render its meaning as 'absence of constraint'.
- Through examining a number of cases of how ordinary folk engage in 'free will' talk, I showed four ways in which free will can be constrained: coercion, manipulation, addiction and mental illness.
- Four common themes emerged from this survey that illustrated the central features of a free act. I labelled these four requirements for free will as the 4 Cs: absence of **C**ompulsion; absence of third-party **C**ontrol, consonance with the agent's **C**haracter and **C**ognitive competence.
- Throughout this survey, we found that the hard determinist's and libertarian's notion that contra-causality is required for free will is absent from the thinking of ordinary folk. It turns out that this notion of contra-causality is a projection of philosophers' and theologians' metaphysical presuppositions onto folk beliefs. Free will talk is largely agnostic to such metaphysical commitments. Free will talk is more an expression of the day-to-day concerns of ordinary people rather than a window into their theological and neuroscientific beliefs.
- This mundane conclusion was further reinforced by looking at other non-spooky uses of the word 'free', such as in the phrase 'free range chickens'.
- For those worried about how we could have done otherwise in a deterministic universe, I gave a straightforward explanation that did not require us having the magical ability to contravene the laws of the nature.
- Finally, I tried to dispel the mistaken notion that ordinary folk somehow experience the 'illusion' of contra-causal free will.

In summary, here is a list of the seven arguments for free will that I presented tonight.

1. Etymology of 'free will' in 16th c. as constrained will
2. Lexicography of 'free will' as absence of coercion
3. Paradigm cases of 'free will' (marry of own free will)
4. Non-spooky other uses of 'free' ('free range', 'free hand')
5. Ordinary language analysis → '4C theory' of free will
6. 'Intrinsic characteristics' analysis of 'could have done otherwise'
7. No 'illusion' of contra-causal free will

If you'd like to examine the question of free will further, I encourage you to download my essay, [Free Will and Compatibilism](#), or read it online. Tonight, we didn't have time to discuss how the question of free will, determinism and libertarianism impacts our notions of moral responsibility, praise and blame. If you are interested in this question, check out the final section of my essay, where I discuss the implications.

Thank you for taking the time to listen to what I had to say. We'll now open up the floor for questions and discussion.

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