**A Causal Consciousness, Free Will, and Dualism  
  
  
Consciousness is necessarily causally efficacious**

It is widely believed by scientists and philosophers, and even the scientifically educated public, that all change in the world is wholly a result of unbroken chains of physical causes and effects. Voluntary behaviour will constitute no exception. More importantly, even the direction our thoughts take will also constitute no exception. But, at least in regards to our thoughts, this does not seem to me to be tenable. Let's see why.  
  
If the scientists and philosophers are correct the direction in which our thoughts develop are not influenced by our consciousness, for they are purely a result of chains of physical causes and effects; presumably the underlying neuronal activity.  Consider, though, that one knows *in the most immediate manner possible* that oneself is conscious. This awareness, moreover, is not an instantaneous thing, it must be smudged out in time. Hence, one might entertain the thought, '*yes, I know for certain I myself am conscious*', even if not expressed explicitly in words. Could this thought, this *realisation*, be *purely* due to chains of physical causes and effects without one's actual consciousness playing any role in the fruition of this thought? No, because this certainty, this thought, is clearly *due* to one's immediate and direct apprehension of one's own consciousness. In other words, it is simply incoherent to suppose one could be certain of one's own consciousness through physical chains of causes and effects *alone*.  At least in this instance, consciousness is an indispensable ingredient and cannot be causally irrelevant.

But, once we have understood and agreed with this, the thesis that only physical causation applies in the direction of our thoughts, unravels.  We *know* that it is false.  For it is scarcely likely that consciousness plays a role in this *one* thought -- '*yes, I know for certain I myself am conscious*' -- but purely chains of physical causes and effects are wholly responsible for all our other thoughts.  It is surely reasonable to infer consciousness is an essential ingredient in the direction of *all* our thoughts.

What, though, if I *speak out* the words, '*yes, I know I am conscious*'? Here, unlike my thoughts, I cannot have certainty. Perhaps my thoughts do not cause the verbal expression of such thoughts. That it is just a wholly unrelated fact that everything I think and mentally choose is reflected in the verbal and physical expression of such thoughts and choices. In other words, that I find myself in this body that, contrary to what it seems, I have no control over whatsoever, *but nevertheless behaves exactly as if it does!* Apart from the outlandish nature of this suggestion, we need to remember that unbroken chains of physical causes and effects were supposed to be *universal*. If my thoughts are not subject to such unbroken chains of physical causes, then presumably what those thoughts appear to directly cause -- namely the neural correlates and behavioural manifestation of such thoughts -- will also not be so subject.

**The causal efficacy of consciousness is not compatible with materialism**

The reductive materialist might claim there is no incompatibility between a causally efficacious consciousness on the one hand, and on the other, that all change is the world is characterised by unbroken chains of physical causes and effects. He justifies this by maintaining that conscious experiences, such as our reasoning processes, are literally *identical* to physical processes in the brain. If a train of thought is literally identical to some physical processes, and these physical processes have causal powers, then it *necessarily follows* that the train of thought has causal powers too.  
  
So, he will claim that my argument is question-begging since I am assuming at the outset a position called dualism. Dualism is the idea that consciousness is *not* the same thing as a material process, even though it still might be created by such material processes.  *Interactive* dualism, in addition, holds that the body affects consciousness with consciousness, in its turn, affecting the body. It's the commonsensical position that we all tend to instinctively believe (even materialists tend to admit we are all instinctively interactive dualists). So, what if reductive materialism is correct. Does my argument still apply?  
  
I have argued in various places elsewhere e.g. [here](https://draft.blogger.com/), that I do not regard reductive materialism as being tenable. But, even if it were tenable, reductive materialism cannot circumvent my argument. Let's now see why.  
  
Let's suppose that when we reason something through and reach a sound conclusion, we have the following mental chain:  
  
i) a → b → c → d → e  
  
And, simultaneously, we have the following correlated physical chain in the brain:  
  
ii) A → B → C → D → E  
  
The materialist claims that “a” is identical to “A”, “b” is identical to “B” etc. But, nevertheless, we have *two different accounts* of how a/A progresses to e/E. In "i", we have a train of reasoning which, when we attain an understanding of something, will have involved rational connections between thoughts. In "ii", we have a chain of physical causes and effects in the form of interactions of physical particles that can be mathematically described by the laws of physics. If any type of materialism is true, then everything has the ability to be explained in terms of the physical as exemplified in account "ii". Account "i" is simply not required since physical laws, which describe physical processes, make no reference to reasoning, nor indeed do they make any reference to intentions, desires, plans, or any other aspect of consciousness. *But, it then follows that reasoning something through is causally irrelevant.* Hence, *identifying* reasoning and the rest of our mental life with physical processes doesn't allow us to escape from the conclusion that our consciousness is causally irrelevant. However, as I’ve already explained, this is surely rendered false if we are not to undermine the complete certainty in the existence of our own consciousness.  
  
As an aside, this constitutes an *additional* reason why reductive materialism could not be correct. Reductive materialism, *by definition*, only allows physical causation, therefore consciousness, *in and of itself*, cannot make a difference. But, if the above argument is sound, it *must* do so.

**Various Objections**

I do not believe my argument can be circumvented. But, for the sake of completeness, I shall now look at four of the commonest objections that have been advanced against interactive dualism.  That is to say, that have been advanced against the notion that consciousness *in and of itself* could be causally efficacious.

**1. Conservation of Energy**

People often assert that if consciousness causally influences the underlying neural activity, then the principle of conservation of energy must be violated. Imagine a billiard ball that starts rolling on its own accord without anything, such as another ball, impacting upon it. Then, if the rest of the world is unchanged, we would have an overall increase in energy that will equal the kinetic energy of the moving ball. Similarly, it is maintained that for consciousness to initiate any material processes instead of any antecedent physical causes, the total energy of the system will be increased. In both cases, conservation of energy is violated.  
  
We need to take a step back here and remind ourselves that current science *wholly* leaves out consciousness in its description of reality (see a [blog post](https://draft.blogger.com/) by me). I think, though, that this will eventually be remedied and a theory will be dreamt up that will reveal consciousness to be non-reducible. However, this will be a radical break from existing theories since we are admitting into the domain of science that which is very different from the structure and function that it currently describes and investigates.  
  
The important point is this: any such theory will have consciousness having an impact on the world. Will such a theory, therefore, entail an ever spiralling increase in total energy? Let's consider what is being said here. Essentially, they're saying, *we have no idea how consciousness exists and what possible theory will accommodate it*, but whatever that theory might transpire to be, a causally efficacious consciousness will result in an increase in the total amount of energy in the world. But, since we have *no* idea what form such a theory will take, *how on earth* can they know this? Why on earth can consciousness not use up energy that is matched by a corresponding *depletion* of energy elsewhere? I submit no-one is in any position to claim that this cannot happen. Certainly, at the very least, they must provide a justification for their allegation rather than simply stating it.

**2. How can the immaterial impact on the material?**

A related objection is that an immaterial consciousness is wholly different from the physical realm, so how could consciousness affect the physical, or indeed vice versa? I think the idea here relates to the fact that consciousness has no location, no mass, no physical properties whatsoever. So, how could it affect that which *does have* a location, a mass and other various physical properties? Underpinning this is the notion that all influences must be physical chains of contiguous causes and effects. So, how can consciousness, which has no location, no mass and so on, possibly influence the physical realm?  
  
I suggest that the people who voice this objection have a certain view of reality where only certain types of regularity are permitted; namely a mechanistic view of reality where all changes are captured by such contiguous physical chains of causes and effects. Essentially, they hold the view that A influences B because there is some innate power in the world that travels from A to B and necessitates change in B.  
  
But, why must reality be limited to such regularities? Why must causes be contiguous? What permits us to *a priori* rule out a reality that admits influences from consciousness, or indeed even mystical principles, or magic and so on? Note that in saying causes may not need to be contiguous, we are not contradicting any physical laws. Rather, we are contradicting the mechanistic view of reality, which at best is a presupposition of science, or at least it was a presupposition of science back in the 17th and 18th Centuries. Physics simply tries to model reality based on observations in the past to predict events in the future. We call these regularities physical laws. I do not believe we can impose *a priori* constraints on the patterns we find there, that is we cannot say reality must conform to contiguous causes. Empirical investigation should guide our beliefs rather than *a priori* presuppositions. Should we dismiss the phenomenon of entanglement because it contravenes such assumptions? And, if we don't, then the alleged universality of contiguous physical causes and effects is refuted. Where one exception is found, we can surely not be surprised if we find others. For an elaboration on this topic, I recommend people read this [blog post](https://draft.blogger.com/) by myself.

**3. No influences apart from physical processes have ever been detected**

It is often claimed that only material influences in the brain have ever been experimentally detected. The implication here if there were any influence from a non-material consciousness, then it would have been experimentally detected by now.  
  
We need to bear in mind here that neuroscientists are almost exclusively materialists, and certainly, they will assume that only physical causation is at work in the brain. But, that strongly suggests that any influence from consciousness is simply not being looked for at all. Any firing of neurons will simply be taken for granted to have been caused by prior physical events. We also need to bear in mind that any influence from consciousness might well be *minute* since very small changes can cascade to larger and larger effects. In which case, *even if they were looking*, our functional MRI's lack the resolution to make any assertions in this regard.

**4. Experiments by Libet et al**

Experiments by the neurologist [Benjamin Libet](https://draft.blogger.com/) and others appear to imply that our conscious decisions do not cause our voluntary acts, rather it is the state of the brain immediately prior to the conscious decision that is the real and sole cause of our behaviour. Here is a [youtube video](https://draft.blogger.com/) briefly outlining Libet's experiment.  
  
So, the experiments seem to suggest that instead of my thought, my *decision*, flexing my wrist, it was prior activity in my brain. In the original experiment, this prior activity occurred around a third of a second before the conscious decision. Libet himself thought that a role for the will was still present in the form of the veto, or what has been termed "free won't". This veto refers to the fact that even after the initiation of this brain activity, we still have the power to stop ourselves from flexing our wrist. Moreover, this veto is not likewise initiated by its own prior brain activity, hence seemingly representing a genuine power of consciousness.  
  
There have been many objections made against Libet's experiment. I won't go into them here since, recently, there's been news of a claim that we have been mistaken in our interpretation of the significance of this prior brain activity. Go [here](https://draft.blogger.com/). It seems, in a nutshell, that the prior brain activity held to cause the decision is largely an artefact of the methods used to analyse the data.

**Free Will and Determinism**

Having now established *at the very least* a limited role for the causal efficacy of consciousness *per se*, and, in addition, seen that the various objections to an immaterial causal consciousness have no bite, can we conclude that we have "free will"? One might think obviously *yes*, indeed I would count myself as one of them. However, it is frequently claimed that free will involves more than a causally efficacious consciousness. Why is this, and is this claim justified?  
  
Consider the claim that our behaviour is purely the inevitable result of chains of causes and effects stretching back to the distant past. Such a thesis is referred to as causal determinism. Typically, these chains are regarded as physical chains. However, since I have concluded that consciousness plays at least *some* role, then this is untenable. But, what about *mental* chains of causes and effects, or a combination of physical and mental chains? Perhaps one's psychological state at any given moment *compels* all future psychological states? In which case, *at least in principle*, our behaviour will be just as predictable as that which pertains within the physical realm.  
  
In fact, a great deal of our behaviour *does* appear to be predictable. For example, the vast majority of us, on spotting a wad of £20 notes on the ground, would stoop down, pick the notes up, and stuff them in our pocket. If someone is parched and water is available, then it is pretty predictable they will have a drink. It is predictable that I will argue against materialism, and not for it. More generally, the more we get to know a person, the more we will be able to predict his behaviour or the views he will express. Does the predictability of our behaviour entail we lack free will?  
  
We need to be leery here of a logical fallacy called [affirming the consequent](https://draft.blogger.com/). To give an example:  
  
1. If the lamp is broken the room would be dark.  
2. The room is dark.  
3. Therefore the lamp is broken.  
  
This is invalid. For example, the lamp might be switched off. Likewise, from the fact that physical processes, which lack free will, are predictable, we cannot definitively conclude that *our* behaviour, although also often predictable, *also* lacks free will. Further information is required: namely, whether the predictability of our behaviour is derived from the *same type of causes* that are responsible for the predictability found in the physical realm.  
  
To cast some light on this question, let's consider the behaviour of objects as described by physical laws. They are typically regarded as being *constrained* to behave the way they do. In other words, they couldn't *possibly* behave otherwise than what they do. For example, if the Earth were to suddenly stop in its path around the Sun and start jigging up and down, this would be regarded as *miraculous*. It's not *just* the case that it would never happen, rather it seems it *could never* happen.  
  
Does the same apply to our apparently freely chosen behaviour? Consider the case of ignoring the wad of £20 notes on the ground and simply walking on by. Unless one is rich, it would be irrational to do this and it would never happen, not even if we reran the Universe countless times. But, *could it* happen?  
  
I think people are often confused here in that they conflate *would never* with *could never*. Simply because people may inevitably choose a certain action -- for example to quench their thirst if they are parched -- this does not mean that they *could not* do otherwise. There is nothing external to consciousness that *compels* people to pick up that glass of water. Rather *the individual* decides to do so. But at least he has the *capacity* to not pick up the glass, even though inevitably he *will* pick it up.  
  
Further, the idea of a mental chain of cause and effect wholly accounting for the procession of our thoughts and decisions is suspect in any case. It is implied that such a chain will be similar to a physical causal chain, such as exemplified by a chain of dominoes falling on each other. However, in a so-called "mental chain", although the prior links in the chain play some role in one’s current mental state, that doesn’t seem to me to be the *full story*. Consider when we think something through. The path our thoughts follow in our chain of thought is not *just* dictated by previous links, that is it’s not just dictated by something already understood. It is also affected and guided by a *contemporaneous unfolding* understanding derived from our non-material selves.  
  
In addition, we should also bear in mind that physical chains of causes and effects *presuppose* that there exist *genuine* impersonal forces in nature. Perhaps, though, something like gravitational force and the other 3 forces, simply do not exist any more than centrifugal force does (physicists do not consider centrifugal force to be a real force). I address this issue [here](https://draft.blogger.com/). If indeed there are no impersonal forces that *compel* reality to behave as it does, then it may be that there is *no* explanation why reality exhibits the patterns it does – it is just a brute fact. The pertinent point here is that if we do not even know that the physical realm is *constrained* to behave the way it does, we can infer nothing about any alleged constraints on free will.  
  
So, I conclude we have compelling reasons to suppose that the predictability of our behaviour stems from a differing ultimate cause to that within the physical realm. Hence, this causal determinism argument gives us no reason to doubt our free will.

**Free will and not wanting what we want**

There are those who have argued that one's desires or interests *themselves* are not amenable to one's control. In short, I cannot *want what I want*. For example, I am interested in various philosophical issues. But, I have very little interest in celebrities. I cannot *instead* choose to be interested in celebrities and uninterested in philosophy.  
  
At least as an objection to the whole concept of free will, I regard this argument to be preposterous. If I could so choose to be interested in celebrities and not in philosophy, then I would be changing my *essence*, what I essentially *am*. It is no restriction on free will if it results in my self changing. In response, the free will detractor might then argue that one did not *choose* to be the self or essence one is. However, this seems to implicitly suppose we are purely material beings that came into being sometime between conception and birth, both of which I have argued against and do not accept. If my essence is non-material, then I am *not* a result of the accidental collocation of impersonal forces. Rather, I am *self*-defined, so to speak.  
  
Nevertheless, this “not wanting what we want” argument does at least have a *degree* of merit. For it seems we could have more control over our wants and desires without it apparently impacting on our essence. For example, surely our free will would be enhanced if one could choose not to feel anger under certain circumstances? Or, if one could choose not to be addicted to unhealthy foods? These and countless other examples point to the fact that our free will is more restricted then we would ideally like it to be. But it does nothing to establish the notion that we wholly *lack* free will.

**Conclusion**

I do not believe my argument for the causal efficaciousness *per se* of consciousness can be circumvented. Nevertheless, for the sake of completeness, I also considered the various arguments that have been advanced that contend our consciousness, at least if considered to be distinct from its underlying neural activity, *cannot* be causally efficacious. I do not believe they pass muster. Indeed, the first two arguments -- namely, the alleged violation of the conservation of energy and the impossibility of the immaterial affecting the material -- appear to be ill-thought-out, to say the least. So, we have good reason to suppose our consciousnesses are causally efficacious *per se*, and no reason, so far as I can see, to doubt such a conclusion.  
  
Of course, such a causally efficacious consciousness does not manifest itself constantly. Much of our behaviour is on what might be labelled auto-pilot. When we're walking somewhere, we're not consciously thinking about putting one foot in front of the other. When playing tennis we do not consciously think of the type of stroke to return. But, we *do* decide to walk to a particular destination, and we *do* decide to play a game of tennis. And this is what is important. For it is scarcely any threat to our autonomy that we are not subject to the necessity of having to think of every step we take and every tennis stroke we make.  
  
Finally, what about free will? Does a causally efficacious consciousness constitute free will? It is my consciousness and not any prior physical activity in the world that makes choices. But, of course, our behaviour is nevertheless often perfectly predictable. However, I have argued that this doesn't impact on our free will. I conclude that under any reasonable conception of free will that we have it.