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Libertarian Freedom and the Principle of Alternative Possibilities

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Introduction

In two recent papers, David Widerker argues against attempts to show that a proponent of libertarian free will and moral responsibility need not accept the principle of alternative possibilities (PAP).[87] PAP has many different formulations, but they are all based on this sort of claim:

> PAP. A person is morally responsible for doing an action A (or has free will with respect to an action A) only if he could have done otherwise than A (or could have failed to do A).[88]

A standard strategy for showing that PAP isn't true is what has come to be known as a Frankfurt-style counterexample.[89] In a Frankfurt-style counterexample, a person P does an action A in circumstances that incline most people to conclude that P is doing A freely, but the circumstances involve some mechanism that would have operated to bring it about that P did A if P had not done A of his own accord. In the actual sequence of events presented in the counterexample, the mechanism does *not* operate, and P does do A of his own accord. So the counterexample is designed to make us think that P does A freely in the actual sequence of events although it is not the case that P could have done otherwise than A.[90]

Frankfurt-style counterexamples can be constructed either for bodily actions such as leaving a room or for mental actions such as deciding to

leave a room. One way Widerker challenges Frankfurt-style counterexamples for mental acts is by focusing on a recent argument of John Martin Fischer's.[91] Here is Fischer's Frankfurt-style counterexample (FFC):

> FFC. Black is a nefarious neurosurgeon. In performing an operation on Jones to remove a brain tumor, Black inserts a mechanism into Jones' brain which enables Black to monitor and control Jones' activities. Jones, meanwhile, knows nothing of this. Black exercises his control through a computer which he has programmed so that, among other things, it monitors Jones' voting behavior. If Jones shows an inclination to decide to vote for Carter, then the computer through the mechanism in Jones's brain intervenes to assure that he actually decides to vote for Reagan and does so vote. But if Jones decides on his own to vote for Reagan, the computer does nothing but continues to monitor—without affecting—the goings-on in Jones' head. Suppose that [in these circumstances] Jones decides to vote for Reagan on his own, just as he would have if Black had not inserted the mechanism into his head.[92]

Fischer argues that in this situation Jones is morally responsible for choosing to vote for Reagan, even though he could not have done otherwise. Fischer goes on to claim that

> F. Nothing about [this] . . . example *requires* the actual sequence issuing in the decision and action to proceed in a deterministic way.

And he says, "if it proceeds in a non-deterministic way that satisfied the libertarian, then Jones can be held responsible, even though he could not have done otherwise."[93] Widerker, however, thinks that F is false.

Libertarians, Widerker says, maintain that

> L. A decision is free only if [1] "the decision [is] not . . . causally determined, and . . . [2] the agent could have avoided making it."[94]

L2 is, of course, the point of contention between Widerker and Fischer; Widerker claims and Fischer denies that PAP is true with regard to mental acts such as decisions. Consequently, Widerker would be begging the question against Fischer if he argued that FFC didn't apply to libertarianism because in that example the putatively free agent in fact violated L2. Widerker's rejection of F, therefore, must focus on whether the putatively free agent in FFC violates

> L1. A decision is free only if it isn't causally determined.

On Fischer's view, nothing in FFC compels us to suppose that the agent is causally determined with respect to deciding to vote for Reagan; and so, on Fischer's view, a version of libertarianism that maintains L1 is compatible with FFC. That is why Fischer thinks F is true and Frankfurt-style counterexamples such as FFC constitute an argument for a rejection of PAP, even for libertarians. But Widerker thinks that no Frankfurt-style counterexamples will be compatible with L1. Since, on Widerker's view, the agent who is putatively free in Frankfurt-style counterexamples is in fact causally determined with respect to his action, the agent will not count as free in the sense libertarians recognize. And so, Widerker thinks, Frankfurt-style counterexamples don't in fact show—at least, don't show libertarians—that agents can be free or morally responsible with regard to mental acts when they can't do otherwise, or that PAP isn't true with regard to mental acts.

Widerker's Argument

Why does Widerker think that no Frankfurt-style counterexamples will be compatible with L1? Why does he think that putatively free actions in Frankfurt-style counterexamples are causally determined? On his view, FFC rests on the presupposition that

> P1. Jones's showing an inclination to decide to vote for Carter is (in the circumstances) a causally necessary condition of his deciding to vote for Carter.[95]

If P1 weren't true, then Jones would after all have had it in his power to decide to vote for Carter. Fischer thinks that it isn't in Jones's power to decide to vote for Carter because he thinks that Jones can't decide to vote for Carter without previously showing an inclination for that decision. And whenever Jones shows such an inclination, the neurosurgeon's mechanism operates to bring it about that Jones decides to vote for Reagan. If Jones could suddenly decide to vote for Carter without having shown any inclination for that decision, the neurosurgeon's mechanism couldn't operate in time; and in that case, contrary to FFC, Jones would have it in his power to decide to vote for Carter. So FFC must presuppose P1 or something very similar.

But if P1 is true, Widerker says, then so is

> P2. Jones's not showing an inclination to decide to vote for Carter is (in the circumstances) causally sufficient for his not deciding to vote for Carter.[96]

So, since in FFC Jones showed no inclination to decide to vote for Carter, Jones's not deciding to vote for Carter was causally determined, Widerker argues. In FFC there are only two possibilities for the agent—voting for Carter or voting for Reagan; consequently, if Jones's not deciding to vote for Carter is causally determined, so is his decision to vote for Reagan. In that case, Jones's decision doesn't meet the condition in L1. Therefore, F is false. And if F is false, Frankfurt-style counterexamples don't after all constitute an argument against PAP as far as libertarians are concerned.

Widerker's argument against Fischer has intuitive appeal. Many libertarians, and others as well, do suppose that a person can choose to do A without having previously had an inclination to choose to do A. In fact, many people tend to think a person can choose to do A after having previously had only inclinations to do not-A. Consider, for example, the criminal who is strongly inclined to lie to the police and who instead finds himself, to his horror, spontaneously and of his own accord confessing to them. Or consider the dieter who was strongly inclined not to eat anything but vegetables at the cocktail party but who finds himself willingly eating the potato chips. It seems to many people that the act in question (confessing to the police or eating potato chips at the party) is freely chosen but without any previous inclination for that choice—rather with a previous inclination opposed to such a choice. Moreover, those libertarians with a commitment to L1 will in particular reject claims such as P1 and P2 as false: an inclination to decide to do A isn't a causally necessary condition for a decision to do A, and the absence of an inclination to decide to do A isn't causally sufficient for a decision not to do A.

Insofar as FFC presupposes P1 and P2, then FFC will not be effective against its intended opponents. In particular, it won't constitute an argument against those libertarians who reject P1 and P2. But all Frankfurt-style counterexamples (at least as regards mental acts) will share such features of FFC, Widerker thinks, because there has to be some antecedent condition that is correlated with the mental act at issue and that can signal the neuroscope (or whatever fictional device the example posits) whether or not to initiate the coercive mechanism. All Frankfurt-style counterexamples will therefore apparently require some analogue to P1 and P2. Consequently, Widerker thinks, Frankfurt-style counterexamples cannot do the job for which they were designed: they cannot show that PAP isn't true. At any rate, they cannot show this without begging the question against libertarians, since they must presuppose the denial of L1, which is constitutive of libertarianism.

Does Widerker's argument against Frankfurt-style counterexamples succeed? I don't think it does.[97]

Friendly Amendment to Fischer's Account

As I will argue, not all libertarians share a commitment to L1, and so not all libertarians would be moved by Widerker's reasons for rejecting FFC. Aquinas, for example, supposes that all acts of will are preceded by acts of intellect of some sort, which play a causal role in volition. But before looking at L1 directly, it is worth asking whether Frankfurt-style counterexamples for mental acts such as deciding *require* supposing that such a mental act is causally dependent on some antecedent mental state, such as Fischer's inclinations. I think the answer is "no." It seems to me possible to construct a Frankfurt-style counterexample for a mental act D of deciding without supposing that the fictional neuroscope of the counterexample detects a mental state or act that is antecedent to D.[98]

To see how to construct such a counterexample, it is helpful to notice that Fischer's evil neurosurgeon uses fairly clumsy neuroscientific technology, since his neuroscope is sensitive just to mental phenomena such as inclinations. So suppose that we replace Fischer's neurosurgeon Black with a more sophisticated neurosurgeon Grey, who uses a neuroscope sensitive to neural firings. Grey ascertains that every time Jones decides to do any of a certain range of actions—say, voting for Republican candidates—the decision to do so regularly correlates with the completion of a sequence of neural firings in Jones's brain that always includes, near its beginning, the firing of neurons a, b, c (call this "neural sequence 1").[99] On the other hand, Jones's deciding to vote for Democratic candidates is correlated with the completion of a different neural sequence that always includes, near its beginning, the firings of neurons x, y, z, none of which is the same as those in neural sequence 1 (call this "neural sequence 2"). For simplicity's sake, suppose that neither neural sequence 1 nor neural sequence 2 is also correlated with any further set of mental acts.[100]

Then Grey can tune his neuroscope accordingly. Whenever the neuroscope detects the firing of x, y, and z, the initial neurons of neural sequence 2, which is correlated with Jones's decisions to vote for Democrats, the neuroscope immediately disrupts the neural sequence, so that it isn't brought to completion, and activates the coercive neurological mechanism which brings it about that Jones decides to vote for Republicans.[101] But if the neuroscope detects the firing of a, b, and c, the initial

neurons in neural sequence 1, which is correlated with decisions to vote for Republicans, then the neuroscope does not interrupt that neural sequence. It doesn't activate the coercive neurological mechanism, and neural sequence 1 continues, culminating, at least sometimes, in Jones's deciding of his own accord to vote for Reagan.

I have now revised FFC so as to omit all mention of inclinations. I'll call the revised counterexample RCE.

It should be clear that we need not espouse any type-type identity theories to tell the story in RCE, although type-type identity theories are compatible with RCE. RCE doesn't presuppose even token-token identity theories, although it is compatible with them also. It requires only that there be *some* correlation between neural sequences and mental states.

By saying that mental states are correlated with neural sequences, I mean to make only a vague association between mental states and neural sequences, compatible with various different theories of relations between mind and brain. Those who think that the mental is identical to the physical can suppose that the decidings and the neural sequences are correlated because the decidings are the neural sequences. Nonreductive materialists can take the correlation as some version of emergence or supervenience. Cartesian dualists might interpret the correlation as causally connected states of body and soul. RCE is, therefore, also compatible with some dualist theories of mind, namely, those that don't suppose mental acts are isolated in the soul, altogether unconnected to neural states. (In my view, Aquinas's account of the soul is a dualism of the sort compatible with RCE, except that Aquinas thinks in terms of bodily states in general, not neural states.[102])

Furthermore, the correlation in question need not even be law-like. All Grey's neuroscope needs in order to operate is a current correlation in Jones between the decisions to vote in certain ways and the neural sequences described. But this correlation need not hold across human beings; it need not even hold throughout Jones's lifetime, as long as it characterizes him in the period in which Grey is investigating and manipulating him.

The neurological fantasy story in RCE is, therefore, compatible with all current theories of mind except the most extreme versions of Cartesian substance dualism. On an extreme version of Cartesian dualism—which Descartes himself may have held—thinking of any sort (including deciding) goes on only in the immaterial soul and isn't mirrored by or correlated with brain processes.[103] On any theory of the mind that sees a stronger tie between mind and brain than extreme Cartesian dualism, there will be some sort of correlation (correlation up to and including identity) between mental processes and brain processes, and that is all RCE needs.

The falsity of P1 and P2 is irrelevant to RCE since it makes no mention of inclinations.[104] In RCE the neurosurgeon's neuroscope responds not to inclinations preceding a decision but to patterns of neural firing correlated with the decision itself. Now RCE is a Frankfurt-style counterexample to PAP.[105] Will RCE, therefore, evade Widerker's arguments?

Frankfurt-style Counterexamples Defended

To answer this question, we have to consider the notion of libertarian free will operative in Widerker's discussion. Widerker's argument focuses on the fact that Fischer's FFC is expressed in terms of inclination, and so RCE, which makes no mention of inclinations, escapes Widerker's argument as he devised it against FFC. But Widerker argues as he does against P1 and P2 because he is convinced that libertarians are committed to L1, the claim that a decision is free only if it is not causally determined.

Now in RCE, the decision to vote for Reagan is still causally determined—not in the sense it was in FFC, in which (as Widerker argues) preceding inclinations are causally necessary for particular decisions, but in a more complicated way. Whatever exactly we take the relation between mental and neural states to be, one mental state is correlated with an entire neural sequence. And the neural sequence consists in a chain of neural firings, in which the firing of one set of neurons causes the firing of other sets. The whole neural sequence of firings, then, is the causal outcome of the chain of causal interactions among the individual neurons constituting the sequence. So because of the correlation between a neural sequence and, say, the mental state of deciding to vote for Reagan, the latter is determined by the chain of causal interactions among the neurons of the sequence. If the mental state is identical to the neural state, or if mental states are states of soul that are causally produced in the soul by the brain, then the mental state is causally produced by the preceding neural states in the sequence. If the mental state is a state of soul that is merely correlated with neural states, without being identical to a neural state or directly caused by it, then the mental state is determined by the causal interactions of the neurons in some more complicated way—for example, in the way some emergentists or supervenience theorists suppose mental states to be a function of neural states.

RCE, then, doesn't presuppose P1 and P2, but it does nonetheless

violate L1 in virtue of supposing that a mental act such as deciding is determined, in one way or another, by underlying neural processes. Does this result show that RCE also fails as a candidate for a Frankfurt-style counterexample to PAP, because it, too, begs the question against libertarians by presupposing the denial of L1, which is constitutive of libertarianism?

Although it might look as if we should answer in the affirmative here, the correct answer in my view is "no." The reason RCE seems to beg the question against libertarianism lies not in RCE but in Widerker's formulation of libertarianism. On L1, only those mental acts that are not so much as correlated with patterns of neural firings can count as morally responsible or free. But then libertarianism could be held only by extreme Cartesian dualists. Clearly, there are committed libertarians who reject any form of Cartesian dualism. Thomas Aquinas is one such libertarian; among contemporary philosophers, Peter van Inwagen is another. So I am inclined to think that Widerker has formulated the conditions for libertarianism too strongly. To avoid making libertarianism a theory only extreme Cartesian dualists can hold, L1 needs to be revised. Libertarians do need to rule out as nonfree mental or bodily acts that are causally determined to be what they are *by something outside the agent*. The claim that a free act is the outcome of a causal chain that originates in some cause external to the agent *is* incompatible with libertarian free will. But the mere claim that a free act is the outcome of any causal chain at all is not.

A more reasonable version of L1, therefore, would count a decision free only if it meets this condition:

> L1′. A decision is free only if it is not the outcome of a causal chain that originates in a cause outside the agent.

Of course, L1′ is not *sufficient* for libertarian freedom. Aquinas, for example, thinks that the essence of freedom is that the agent's own mental faculties, her intellect and will, are the ultimate source of any free act, and not something outside the agent. But L1′ captures what Aquinas takes to be a *necessary* condition for freedom, namely, that a free action (mental or bodily) not be caused by something external to the agent.[106] On this way of thinking about L, the issue between Fischer, who takes libertarianism with regard to mental acts to be compatible with Frankfurt-style counterexamples and the rejection of PAP, and Widerker, who doesn't, is this: are the actions meeting condition L1′ just those actions where the agent could have done otherwise? And here Frankfurt-

style counterexamples, such as RCE, seem to me decisive. RCE is compatible with supposing that nothing outside the agent causally determines the mental act in question; and yet in RCE the agent could not have acted otherwise than he did.

An Objection

At this point someone may object. If we bring contemporary theories of the nature of the mind into the discussion of free will, the objector will argue, then (unless we accept extreme Cartesian dualism) it will not be possible for RCE to be compatible with the requirement of L1′. Contemporary theories of the mind other than extreme Cartesian dualism correlate mental and neural states. But, the objector will maintain,

> O. There are no uncaused neural events, and the chain of causation will eventually be traceable to something outside the agent.

So if mental states are determined by neural states, they will also be determined, more remotely, by causes outside the agent, contrary to the stipulation in L1′.

The objector will perhaps meet little opposition regarding his claim that all neural events are caused. Is he also right in supposing that, therefore, the chain of causation will lead outside the agent? Are all brain processes causally determined, ultimately, by something outside the agent?

This is a difficult and complicated question that carries considerable philosophical freight. The first thing to see about it is that it certainly isn't answerable by appeal to neurobiology. We are very far from having a complete or even reasonably adequate neuroscience. It is fitting that the third edition of the widely used textbook *Principles of Neural Science* has a photograph of the Rosetta stone as its frontispiece.[107] We still lack the Rosetta stone for neurobiology, in the sense that we don't understand even the general principles by which the brain produces or contributes to cognitive function, as we do understand at least the general genetic principles that underlie biological inheritance and differentiation. Even for visual perception, where we know a considerable amount about how things outside the perceiver affect the brain, we are far from having a clear idea of the causal relations leading from a visually presented object to the neural states that constitute or are correlated with visual recognition of the object. But what we currently know of such processes

strongly suggests that the neural states in question are underdetermined by the impact of the perceived object on the perceiver. As one pair of neuropsychologists put it, "although the kind of information sent to a [neural] network restricts what it can do, the input alone does not determine what a network computes."[108] As matters now stand, then, neuroscience alone won't tell us whether the objector is right or not, although what evidence we have undermines rather than supports his position. The objector, therefore, can't point to results in neuroscience to demonstrate his claim that all brain processes are ultimately causally determined by something outside the agent.

We might suppose that science in general shows that any neural event must be caused by something outside the agent, because all events are part of an extensive set of causal chains that lead back to the Big Bang, so that a perfect knowledge of natural laws and conditions at the time of the Big Bang would enable a person to predict everything that came thereafter. But the growth of interest in chaos theory has made this form of determinism unpopular. In a recent article, Stephen Jay Gould, for example, associates this view with eighteenth-century optimism and rejects it with this dismissive remark: "The nature of universal complexity shatters this chimerical dream."[109]

What chaos theory undermines is just our ability to predict or explain the causal chains of events found in nature. So we might suppose that even if deterministic causal series aren't always predictable, they nonetheless exist. Although it might, therefore, be true that we couldn't predict the causal series that link the world outside a human body with events in the brain of that body, we might think, there still are such causal chains, and they determine what happens in the brain. Otherwise, it would seem, brain events would be insulated from the physical interactions of the surrounding extrabodily environment, and the causal nexus of brain events would be incomplete and perplexingly truncated. So, on this view, the events at the time of the Big Bang are the start of causal chains that eventually lead in a deterministic way (or a probabilistic way, to account for the indeterminacy introduced by quantum mechanics) to all subsequent events, including brain events, even if those subsequent events aren't knowable or predictable at the time of the Big Bang.

This way of looking at things, which will perhaps seem obviously right to many people, rests not so much on scientific results as on philosophical convictions that include both reductionism and determinism. It assumes that all events, including biological events and events at the macroscopic level, are reducible to causal interactions at the microstructural level; and it supposes that (apart from quantum indeterminacy) there is a complete

causal story to be told about everything that happens, that there is no genuine contingency or chance in nature. What we call chance is only a matter of our ignorance, stemming from our inability to comprehend all the forces operating on complicated sets of initial conditions and our consequent inability to predict the outcome of a particular event or series of events.

Although reductionism comes in many forms, its different forms share a common attitude: all the sciences are reducible to physics, and scientific explanation will be ultimately formulable solely in terms of the microstructural. But this attitude discounts the importance of levels of organization (or form, as Aristotle and medieval philosophers would say) and the causal efficacy of things in virtue of their level of organization. This feature of reductionism perhaps helps explain why it has come under special attack in philosophy of biology.[110] Biological function is frequently a feature of the way in which the microstructural components of something are organized, rather than of the intrinsic properties of the microcomponents themselves. Proteins, for example, tend to be biologically active only when folded in certain ways, so that their function depends on their three-dimensional structure. But this is a feature of the organization of the molecule as a whole and can't be reduced to properties of the elementary particles that make up the atoms of the molecule. In fact, for large proteins, even an omniscient knowledge of the properties of elementary particles of the atoms that comprise the protein may not be enough to predict the shape of the folded protein, because the activity of enzymes is required to catalyze the folding of some proteins.[111]

In his magisterial treatment of reductionism in *The Disorder of Things*, John Dupré takes the examples in his arguments against reductionism not so much from molecular biology as from ecology and population genetics.[112] On reductionist views, Dupré says, "events at the macrolevel, except insofar as they are understood as aggregates of events at the microlevel—that is, as reducible to the microlevel at least in principle—are causally inert. This . . . is the classical picture of Laplacean determinism, except that it does not depend on determinism, only the causal completeness . . . of the microlevel."[113] But, as Dupré's examples from biology make clear, "there are genuinely causal entities at many different levels of organization. And this is enough to show that causal completeness at one particular level [the microlevel] is wholly incredible."[114] Dupré thinks that commitment to reductionism was strongly motivated by a belief in determinism, either of the classical variety, which supposes that there is a complete causal story, a sufficient antecedent condition, for everything that happens, or its quantum mechanical analogue, which

supposes that there are antecedent conditions that determine particular probabilities for events. Consequently, Dupré thinks his arguments against reductionism are also part of an argument for either variety of determinism as well. His arguments against reductionism provide, he claims, an "inversion of the reductionist *modus ponens* (Causal completeness requires reductionism) into . . . [an] antireductionist *modus tollens* (the failure of reductionism implies the failure of causal completeness)."[115]

So O rests on philosophical views that aren't obviously true but are rather the subject of considerable controversy.

It seems, then, that neither science nor philosophy can demonstrate O's truth. Therefore, while it is uncontroversial that neural events are causally *influenced* by events outside the agent, it isn't at all clear that they are causally *determined* by events outside the agent. There may well be biological events, including biological events in the brain, where the ultimate causal determination of the event is internal to the agent. To take a simple example having nothing to do with mental events, prion protein is normally found on the outside of neurons, where it is innocuous; but it can mutate into a highly destructive form in some individuals, as a result of the internal environment surrounding the neuron.[116] If Dupré's rejection of reductionism and determinism is right, the mutation of prion protein may be an example of a genuinely contingent event, produced by causal efficacy at a level of organization higher than the level of elementary physical particles and resulting ultimately just from chance encounters among molecules within the brain. In such a case, if Dupré is right, events external to an agent may have some causal influence on the shaping of the internal environment of the brain, but there need not be any such external events causally sufficient for the neural chain of events culminating in the mutation of the prion protein.

The Larger Issue

Here we may seem to have reached a familiar impasse, which is just highlighted by bringing theories of the nature of the mind into discussions of free will. The objector supposed that all neural events must be causally determined by something outside the agent and that, therefore, if neural events and mental events are correlated as RCE assumes, RCE isn't compatible with L1′. I have tried to cast doubt on the objector's position; but, in the one example I have used to illustrate my point, the example of prion protein, chance instead of external causation produces

the brain event in question. If the only way to defeat the objector is to claim that neural events are brought about by chance when they aren't causally determined by something outside the agent, then the victory over the objector is Pyrrhic. If the only options are external causal determinism or accident, the libertarian has lost the argument; his position is sunk either way.

Aquinas's position gives a helpful insight into why the libertarian can't avail himself of either option. An action is free on Aquinas's view in case the ultimate source of the action is the agent's own intellect and will. (Aquinas doesn't think that for an action to be free the agent has to have reasoned, consciously and rationally, about the action; the action could have been the result of unconscious and irrational cognitive processing and still count as ultimately stemming from operations of the agent's intellect and will.) But if either causes outside the agent or sheer accident is responsible for neural events correlated with the agent's acts of intellect and will, the ultimate source of the action isn't the mind of the agent.

Some contemporary philosophers share Aquinas's basic intuition about the nature of freedom. For example, Fischer's account of moral responsibility is like Aquinas's account of free actions in this respect: Fischer thinks that moral responsibility is a function of an agent's reasons-responsive mechanism.[117] And one way of understanding the point of contention between compatibilists and libertarians of any sort is this: is it possible for the brain to be a reasons-responsive mechanism if neural events are produced only by accident or by causes outside the agent? A compatibilist will say "yes"; libertarians such as Aquinas will say "no". That is why, if mental events are tied to neural events and neural events must stem either from accident or from causal determination by something outside the agent, the libertarian position has lost.

Part of what makes it hard to adjudicate between the compatibilist and the libertarian here is that we are so far from understanding how the brain can be a reasons-responsive mechanism at all, on anybody's theory of mind or free will. Except for extreme Cartesian dualists, most philosophers suppose the brain *does* constitute a reasons-responsive mechanism, but it is hard to see *how* a biological organ such as the brain can respond to reasons or process information. Neurobiologists are in no position to give anything other than promissory notes on this subject, and the best philosophical attempts are ultimately unpersuasive even if ingenious.[118] But unless we understand how a biological organ such as the brain can be an information-processor or a reasons-responsive mechanism, we won't be able to give a scientific account of our cognitive functioning that settles the question at issue between the compatibilist and the libertarian.

Looked at philosophically, rather than scientifically, compatibilism appears to be a sort of corollary to reductionism and determinism. If all macrophenomena are reducible to microstructural phenomena and if there is a complete causal story to be told at the microlevel, then whatever control or freedom we have as macroscopic agents has to be not only compatible with but in fact just a function of the complete causal story at the microlevel. But if reductionism and determinism are rejected, then, as Dupré argues, there can be causal efficacy at various levels of organization, including the level of human agents. A person's intellect and will can exercise real causal efficacy, from the top down, in the way Aquinas supposes they do. Dupré says, "Humans have all kinds of causal capacities that nothing else in our world has. . . . There is no good reason for projecting these uniquely human capacities in a reductionist style onto inanimate bits of matter. Nor is there anything ultimately mysterious about particular causal capacities being exhibited uniquely by certain very complex entities." He can take this position without what he regards as "metaphysical excesses," such as accepting extreme Cartesian dualism, because having rejected reductionism he is free to hold that "there is no reason why changes at one level may not be explained in terms of causal processes at a higher, that is, more complex level. In the case of human action, the physical changes involved in and resulting from a particular action may perfectly well be explained in terms of the capacity of the agent to perform an action of that kind."[119] If Dupré is right, compatibilism looks like an unnecessary concession, an attempt to preserve what we commonly believe about our control over our actions in the face of a mistaken commitment to reductionism and determinism.

Dupré's attitude toward reductionism and determinism is, of course, controversial; many philosophers of mind, in particular, are explicit adherents of reductionism. I myself find Dupré's case against reductionism persuasive, but the issue is much too large to adjudicate in passing here. Consequently, this is where the discussion stands. If RCE violates L1′ because of the correlation between mental and neural states, as the objector supposes, then, for the same reasons, libertarianism is false, for all versions of libertarianism that are combined with a theory of the mind other than extreme Cartesian dualism. (And this result holds even if, contrary to my argument, libertarianism is committed to L1 rather than to L1′, since if the correlation of mental and neural states implies that all mental events are caused by something outside the agent, it also implies that all mental events are caused.) On the other hand, if RCE does not violate L1′, then it constitutes a viable Frankfurt-style counterexample

to PAP, and L2 isn't a necessary condition for libertarianism any more than L1 is, contrary to what Widerker supposes.

Which of these possibilities is the right one depends on whether the objector is right in supposing that all neural events are the product of causal determination by something outside the agent. Since determining whether the objector is right requires either results from neuroscience far in advance of anything now available to us or the final adjudication of large and controversial philosophical issues, it isn't possible to show that the objection is mistaken; by the same token, it isn't possible for the objector to demonstrate the truth of O. Since this is so, it is open to the libertarian to hold that RCE is compatible with L1′. Furthermore, and more importantly for Widerker's position, unless the libertarian is an extreme Cartesian dualist, his choice is either to hold that the objector is wrong and RCE is compatible with L1′ or to give up his libertarianism.

Conclusion: Adjudicating between Fischer and Widerker

We can now adjudicate the dispute between Fischer and Widerker.

I've argued that the first of the claims Widerker takes to constitute libertarianism is too strong, requiring libertarians to reject all theories of the mind except extreme Cartesian dualism. To avoid being committed to extreme Cartesian dualism, the libertarian needs to hold as a necessary condition L1′, that decisions are free only if they aren't causally determined by anything outside the agent, and not L1, that decisions are free only if they aren't causally determined at all.

RCE doesn't violate L1′, unless O is right. It's difficult to adjudicate the issues raised by O, but the libertarian's position requires a certain stand with regard to it. The libertarian is committed to a theory of freedom that requires him to deny that all mental acts are caused by something external to the agent. Consequently, unless he is an extreme Cartesian dualist and supposes that there is no correlation between mental acts and neural events, the libertarian must think that the objection to RCE is mistaken: it isn't the case that all neural events are caused by something external to the agent. So if the libertarian isn't committed to extreme Cartesian dualism, he must reject O and grant that RCE is a Frankfurt-style counterexample that is compatible with supposing that free decisions are not externally caused. Given the arguments that libertarianism is committed to (L1′) but not (L1), he should consequently also grant that (RCE) is compatible with libertarianism.

Therefore, (RCE) can be construed as a Frankfurt-style counterexample in which an agent has libertarian freedom with respect to a mental act D, but could not have done otherwise than D. Widerker's argument

against FFC doesn't apply to RCE. Consequently, Widerker's arguments against Frankfurt-style counterexamples to PAP fails, and RCE therefore shows that PAP isn't necessary for free will even in a libertarian sense.

Nothing in this argument has the implication that libertarian free will is never accompanied by alternative possibilities. It may be true that in most cases in which an agent acts with free will or is morally responsible, the agent can do otherwise. What Frankfurt-style counterexamples show is only that the ability to do otherwise isn't essential to a free action or an action for which the agent is morally responsible. It might nonetheless be the case that the ability to do otherwise is what the medievals called an associated accident, an accident that accompanies free will or moral responsibility much or even almost all of the time.[120]

Finally, this discussion of Frankfurt-style counterexamples shows what is essential to free will if the ability to do otherwise is not essential. In Widerker's view, libertarianism holds that

> L. A decision is free only if [1] "the decision [is] not . . . causally determined, and . . . [2] the agent could have avoided making it."

As I argued above, L1 is too broad and should be replaced with L1′: the decision is not the outcome of a causal chain that originates in a cause outside the agent. The success of Frankfurt-style counterexamples shows that L2 is also too strong. What is necessary for libertarian free will is, as Aquinas says, that the ultimate source of the action be the agent's own will and cognitive faculties, whether or not the agent has alternative possibilities open to him in the circumstances. Widerker's definition of libertarianism can then be emended or reformulated in this way:

> LR. A mental or bodily act is free only if (1) the act is not the outcome of a causal chain that originates in a cause outside the agent, and (2) the ultimate cause of the act is the agent's own will and cognitive faculties.[121]

Libertarians thus need not accept PAP, and its acceptance isn't necessary for a rejection of compatibilism, since a compatibilist could not accept LR. Frankfurt-style counterexamples are successful against PAP; but, contrary to what Widerker supposes, the libertarian has nothing to fear from them. Unless extreme Cartesian dualism is the right theory of the mind, libertarianism would be in serious trouble if it could be shown that neural events are always caused by events external to the agent. But Frankfurt-style counterexamples can certainly not demonstrate that, and neither science nor philosophy gives any sign of being able to do so, either.[122]