

# 4

## FREEDOM

There are loads of ways in which you are said to be free. Here's a small sample: 4.1

- You are free to speak your mind.
- You are free to bear arms.
- You are free to worship how you please.
- You are free from hunger.
- You are free from poverty.
- You are disease-free.

The first three kinds of freedom are largely political. That is, according to certain laws you are free from governmental interference or constraint. No one's stopping you from criticizing the leaders, packing heat, or practicing Scientology—feel free! The other forms of freedom above are also a kind of absence of outside barriers, such as disease, poverty, and hunger that impede you from living your life as you choose. These senses of freedom are important in discussions of **political philosophy**,<sup>1</sup> and how the existence of political authority might reduce some freedoms (you are less free to spend your money as you wish because of taxation) while at the same time increasing other freedoms (you are free from ignorance because of taxpayer-funded education). As interesting as these freedoms are, they aren't the main sort of freedom that has troubled philosophers for two millennia. The big worry has been over free will.

So what is free will exactly? Well, that's part of what the brouhaha is all about, but here's a fair first attempt: 4.2



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*Free will:* Your will is free just in case you can choose to perform one action instead of another.

The idea here is that free will means being able to direct your own actions, to pick one thing over an alternative. The past is fixed and immutable, and you are not free to change it. But the future is open to you, and you are at liberty to direct its course. Imagine standing at a fork in the road with a dozen branches ahead of you, each representing a future path that you could follow. All it takes is for you to decide, to pick one over the others. There aren't any barriers, and no one is pushing you from behind: the choice is yours. To be free at a time is to be standing at that fork, facing the open future. You can choose vanilla ice cream or chocolate, you can choose to listen to Bach or Lady Gaga, you can choose to study or go to the party. Furthermore, "choice" means effective choice—your choosing to study brings about the event of your studying. True choice is not idle, like "I choose to be invisible." There is nothing you can directly or indirectly do to make yourself invisible. Your free will is the power you possess to set foot on one path into the future over another. The future is not set; there is no fate but what you make for **yourself**.<sup>2</sup>



4.3

There is little doubt that you believe that your will is free and that you can choose your own future. The problem is, as the eighteenth-century British wit Samuel Johnson once remarked, "**all theory is against the freedom of the will; all experience is for it.**"<sup>3</sup> Let's proceed to what these theories might be that are against the freedom of the will.



### Why There Is No Free Will, Part 1: Divine Foreknowledge

- 4.4 Philosophers and theologians have been troubled since the Middle Ages that if there is an omniscient God, then free will seems impossible. Think about how well you are able to predict the behavior of your friends. With your close friends, you can guess quite well how they will act in certain circumstances. You know that if you go with your best friend for coffee, he takes it black, and when the coffee comes he will not add milk or sugar. You know that another friend is paranoid about running out of gas and that she always gets fuel when the tank is down to a quarter full. On a road trip with her, you can easily predict when she will pull over for gas. Admittedly, you can't predict each and every action by even your best friend. But

that only shows that your knowledge of others is imperfect; you can't know every last thought or impulse in their heads, or every possible circumstance they might find themselves in. You can't, but God can. God is omniscient—he knows *everything*, every sparrow in the sky, the number of hairs on your head, how many grains of sand are at the beach. You might be able to predict your friends' behavior fairly accurately, but God is 100 percent infallibly certain of what they will do. Yet if God knows what they will do, how is it possible for them to have done anything else?

### Presentation of the argument

Here's a concise version of the problem of divine foreknowledge.

4.5

1. Assume there is an omniscient God. (premise)
2. If God is omniscient, then he infallibly knows every fact about the past, present, and future. (premise)
3. Therefore, God infallibly knows every fact about the past, present, and future. (from 1, 2)
4. Therefore, God infallibly knows everything that you will do, every action you will perform, and everything that will happen to you. (from 3)
5. If God infallibly knows everything that you will do, then it is impossible for you to do anything other than what God knows you will do; you have no choice. (premise)
6. Therefore, you have no choice in what you will do. (from 4, 5)
7. If you have no choice in what you will do, then you are not free. (from the definition of free will)
8. Therefore, you have no free will. (from 6, 7)

### Objection 1: Atheism and agnosticism

Theists are generally keen on salvaging free will. If God knew since the beginning of the world that Lucifer would defy him, that Judas Iscariot would betray Jesus, and that Pharaoh would refuse to liberate God's chosen people, why would God punish those folks? It's not like they had any choice in the matter. It seems unreasonable to hold them responsible for actions they were doomed to perform. The problem of free will and

4.6

moral responsibility will be discussed in more general terms later in this chapter. In addition, appeal to human free will is one of the classic responses to the problem of evil (discussed in the chapter on God). If divine foreknowledge really means that no one is free, then the existence of suffering cannot be blamed on people making the wrong choices; there is no such thing as choice. So eluding the divine foreknowledge problem is important.

- 4.7 There is a really easy way to solve the problem: reject premise 1. Either deny that there is an omniscient God (atheist style) or refuse to have an opinion either way (agnostic style). God's existence is addressed in some detail in the chapter on God. If you aren't convinced that God really does exist, then of course you have no reason to be troubled about whether his knowledge of the future precludes your freedom. This may seem terribly obvious, but it is worth pointing out that the problem of divine foreknowledge isn't a wholly general threat to the possibility of free will. It is only a puzzle for theists. Now, if you do think that there is an omniscient God, then you have to look for some other way to get out of the argument. Here's another escape route.

#### Objection 2: Aristotle's answer



- 4.8 In *On Interpretation* (section 9),<sup>4</sup> which is part of his treatise on logic, the Greek philosopher **Aristotle**<sup>5</sup> insisted that there are no facts about the future. Suppose that the Persian fleet is sailing towards Athens. Aristotle argued that there most definitely either will or will not be a sea battle tomorrow. But that's not a fact about the future. *Any* claim of the form "either p is true or p is false" is true; that's no more than a general logical law. However, it is not true that "the Persians and Athenians will have a sea battle tomorrow" nor is it true that "the Persians and Athenians will *not* have a sea battle tomorrow." In other words, no statement about the future is either true or false. There are concrete facts about the present and the past, but the future is no more than a formless void. Here's how things stand according to Aristotle:
- a. Either there will be a sea battle tomorrow or there won't be. (true)
  - b. There will be a sea battle tomorrow. (no truth value; neither true nor false)
  - c. There will be no sea battle tomorrow. (no truth value; neither true nor false)

God knows (a) but doesn't know (b) or (c). Until tomorrow comes, there is nothing to know.

If Aristotle is right that there are no future facts, then premise (2) of the divine foreknowledge argument is false. God's omniscience does not extend to the future because there is nothing to know. God does indeed know everything knowable—every truth of the past and present. But since there are no truths about the future for him to know, it is no limitation on his omniscience to say that God does not know what the future will bring. When the future arrives and becomes the present, then God knows whether the Persian and Athenian navies do battle. But not a moment before.

There are various logical objections to the idea of some propositions having no truth values at all, even if they are only statements about the future. The **worries** of logicians are beyond what can be addressed here.<sup>6</sup> However, if Aristotle is right and there are no facts about future, then what explains the fact that we can often accurately predict the future? It is mysterious as to why our present speculations about such a nebulous future should have any legitimacy at all. You might insist that there are present facts about what is probable in the future, for example, "it is probable now that there will be a sea battle tomorrow." That's a perfectly legitimate sentence for Aristotle, because it refers only to what is true now in the present moment. However, this sentence: "tomorrow it is probable that there will be a sea battle" remains neither true nor false, since it refers to some future fact. That result seems strange and arbitrary.

Let's set the divine foreknowledge argument aside and look at another argument against free will, one that is applicable no matter what you think about God.

## **Why There Is No Free Will, Part 2: A Regress of Reasons for Acting**

Did you decide to read this chapter? There are only two possible answers, namely "yes" and "no." Suppose the answer is "no." That doesn't mean you aren't reading it; we all do plenty of things that we don't particularly decide to do, things that we do out of habit, as a matter of routine, or perhaps even randomly. Ever drive a familiar route and then realize that you can't remember any part of the drive for the last ten minutes? The drive is just part of a routine that you don't really think about; you do it subconsciously. Or when you brush your teeth—do you really make a decision about every



stroke? “Up,” you think, “now down . . . all the way, OK, now up again, don’t press so hard . . . down once more.” Of course not. You probably daydream, or worry, or plan your day like everyone else when you brush your teeth. You don’t think about the brushing. You just do it. So maybe reading this chapter is like that—without really deciding to, you found yourself sitting in your chair with this book in your hand. You started reading this chapter without thought, zombie-like.

- 4.13 No, you say? You actually decided to read it? Good for you. How did you decide? Of your own free will? Let’s think about that for a bit. There are lots of other things you might have done instead; you could have slept in, consumed a refreshing adult beverage, studied for another class, played some tennis, kissed your lover. How did you decide to read about free will instead of those other things? Presumably you thought it over, you weighed out the reasons pro and con for reading the chapter, and the pros won out. There are many good reasons for reading it after all—nothing is more exciting and stimulating than philosophy, the writing style is breathtaking in its excellence, free will is a great topic, and let’s not forget the weight contributed by the fact that it will be on the test and you desperately need to pass this class to graduate. There were reasons on the other side to blow it off, true, but it turns out that they just weren’t as weighty. The image of deliberation here is that of pair of scales, a mental balance if you will. In one pan are the reasons for performing the action and in the other are the reasons against performing the action. The balance tips in one direction or other, and that’s the action you perform. What explains your decision to read this chapter? You weighed out the options, and reading the chapter won.

#### Previous decisions vs. outside forces

- 4.14 There is still a mystery to be solved, though. Why should the things that counted as a reason to read the chapter (or not read it) be reasons at all? And why do they have the relative weight that they do? If your **GPA (grade point average)** is 0.0,<sup>7</sup> maybe you don’t especially care about the upcoming test or passing the class. So the fact that reading this chapter is instrumental to passing the test just has no value, no weight for you. It doesn’t even count as a reason to read it. Likewise, if you’ve had plenty of sleep, the option of sleeping in doesn’t have much pull either. We can put it on the scale on the “con” side, but it doesn’t weigh very much. It is clear, then, that which things count as reasons to keep on reading this chapter and which things count



as reasons not to read it are going to vary from person to person, perhaps even from moment to moment. What explains which things are reasons for you, and how much they weigh? There seem to be only two possible answers, namely that the explanation is rooted ultimately in you and your decision-making, or that the explanation is rooted outside of you in other forces and factors. Here are our alternatives.

*Previous decisions:* Your reasons for acting are the result of some previous decisions you made.

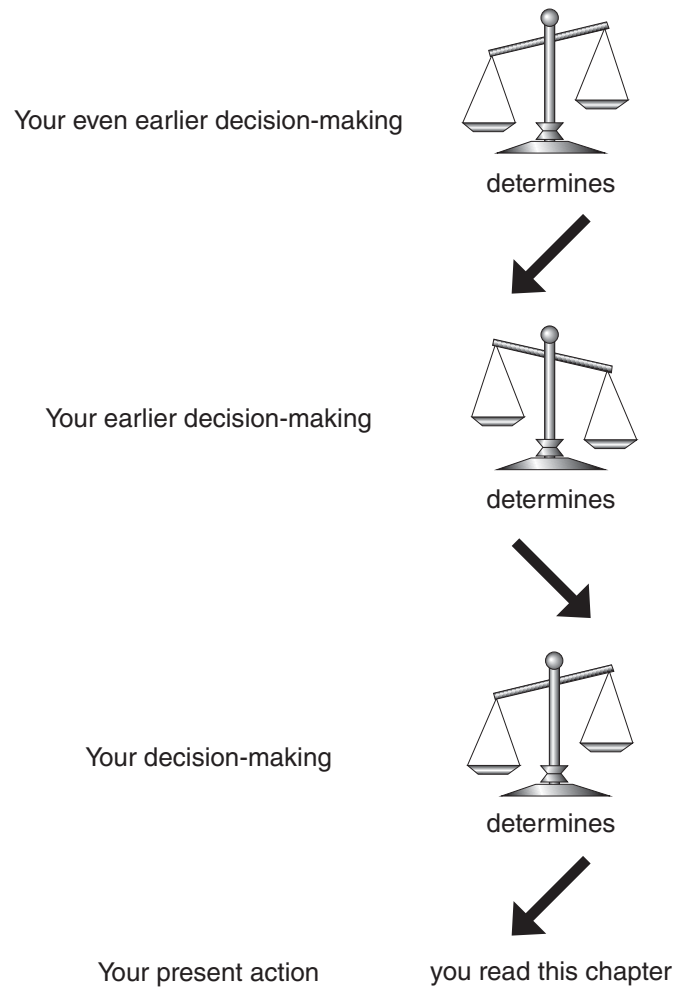
*Outside forces:* Your reasons for acting somehow came from forces and influences outside of your mind (for example: authority, family, society, environment, or innate biological instincts).

With the previous decisions option, you made choices in the past, and these choices determine your preferences and desires now. For example, in the past you decided to come to college and be successful, and this prior decision is what gives weight to the value of studying and reading assigned texts. Likewise for the other reasons pro and con: their relative weight, and that they amount to reasons for acting at all, is the result of earlier decision-making.

The problem with this answer is that it apparently leads to an infinite regress. Your decision to read this chapter is explained by your earlier decision to study in college, which is the result of your prior decision to do some action A which is explained by your even earlier decision to do B, and on back. If we think about decision-making as the tipping of scales, then it looks like Figure 4.1. 4.15

We can just keep adding little balances back in time. You didn't make an infinity of decisions before deciding to read this chapter. You haven't had enough time. As a baby did you make some first decision that determined everything else in your life? How did you make *that* decision? It couldn't be the result of any prior decision-making, being the very first one. Therefore it can't be the case that *all* of your decisions are the causal consequences of earlier decisions. Suddenly decision-making seems inexplicable. 4.16

Maybe the outside forces option is the right answer. The reason that you care about education (and therefore passing the class and reading this chapter) is because of the values instilled in you while you were growing up. The reason that you like philosophy is because of your fortunate genetic heritage along with the inquisitive nature that your parents, friends, and teachers always encouraged. Your values, your reasons for acting, are 4.17



**Figure 4.1** Decision-making regress

thereby the result of these outside influences that have molded and shaped you into the person you are. When we ask the question “How did you decide to read this chapter?,” the answer is that you weighed out the pros and the cons. When we press on to ask what determines a reason to be a pro or a con, and what fixes how much each reason weighs, the answer is that your biology, experiences, upbringing, and environment determine these things. The important thing to notice here is that all of these forces are outside of your control and not the result of your choosing. No one chooses their families, or what society they were born into, or what teachers they have, or any of those other things. Your present decision to read this chapter isn’t the result of some earlier decision that you made, but the



outcome of forces completely outside of you. The argument against free will is just around the corner.

#### The regress of reasons argument against free will

1. You always act according to your greatest desire. (premise)
2. Your desires and their relative strengths are outside of your control. (premise)
3. Therefore your actions are outside of your control. (from 1, 2)
4. If your actions are outside of your control, then they are not the result of your choices. (premise)
5. Therefore your actions are not the result of your choices. (from 3, 4)
6. If your actions are not the result of your choices, then you have no free will. (from the definition of free will)
7. Therefore, you have no free will. (from 5, 6)

The defense of the first premise is implicit in our discussion so far. The image of a mental balance represents the weighing of your desires, and when it tips, it tips in the direction of the greatest weight, that is, the overall greatest desire, upon which you then act. “Your greatest desire” in this context doesn’t mean your greatest wish or fondest hope. The statement of premise (1) that you always act on your greatest desire does not mean that you can fly like Superman, buy a Ferrari, travel in time, or whatever else you may fantasize about. It’s not physically possible for you to fly, it’s economically impossible to get the Ferrari, and (probably) not metaphysically possible to travel in time. But of all the actions you can possibly perform, you always perform the one you want to do the most. If premise (1) were false, then your intentional actions would be inexplicable; why didn’t you do the thing you wanted to do the most? The answer is that you actually wanted to do something else even more. Accidental acts or those that stem from the subconscious might not be your greatest desire, but such actions aren’t good candidates for free actions either. <sup>4.18</sup>

You might object that you don’t always act on your greatest desire. You might suppose that if you’re on a diet, you may want to scarf a pint of Ben <sup>4.19</sup>

and Jerry's Chunky Monkey more than anything else, but nevertheless manage to resist. If you're sleepy and hungover, you may want to stay in bed more than get up for work, yet still drag your carcass to the shower and out the door. There is no doubt that we frequently have many conflicting interests—desire for Chunky Monkey vs. desire to stay on the diet, desire for sleep vs. desire for continued gainful employment, desire to go to the party vs. desire to study for the test. In these situations you can't do both. If you wind up pigging out on Chunky Monkey, then your greatest desire was to have the ice cream, something proven by the fact you are eating it. The desire for rich, creamy banana ice cream stuffed with nuts and chocolate chunks was a stronger desire than staying on the diet. Conversely, if you stayed on the diet, *that* action really was the result of your greatest desire. So you do act on your greatest desire, even if there is a powerful conflicting desire that pulls you in the opposite direction. In the tug-of-war among your wants, the victory goes to the strongest.

4.20 The second premise was just defended—it is factors outside of you, independent influences that you can't control, that determine the existence and strength of your desires. (3) seems to be a straightforward consequence, your actions themselves are, in some fundamental and ultimate way, outside of your control. Yet if you aren't in control of your actions, then it seems that you are not free, that you are a mere puppet of external forces, and that your own sense of freedom, your feeling of making a choice out of nowhere is an illusion. Keep in mind that the argument at this point isn't that you can't act against your greatest desire, but that your greatest desire at any given moment has, in some deep sense, little to do with you.

4.21 Wait, you say, perhaps our desires are *influenced* by outside events, our upbringing, our church, family, etcetera, but *I'm* the one who decides how I'll react to those influences. Well, it sure feels that way, doesn't it? Unfortunately, this response just sends us right back to the question we began with: "How do you decide? How do you make your decisions?" It was in trying to answer this question that we were driven to the idea that your desires are outside of your control, that you have no choice over them. So claiming that you decide how to react to outside influences is no help at all; it assumes that we've already made sense of the very thing we're puzzled about, thus committing the error in reasoning that logicians call "begging the question." The very issue before us is trying to figure out how it is possible to make a free decision; the answer cannot simply appeal to having made one.

### The digger wasp

The argument we've been examining so far suggests that our desires and actions are in some sense mechanical, the mere outcomes of prior forces. In fact, consider the case of the digger wasp, *Sphex ichneumoneus*.<sup>8</sup>



When the time comes for egg laying, the wasp *Sphex* builds a burrow for the purpose and seeks out a cricket which she stings in such a way as to paralyze but not kill it. She drags the cricket into the burrow, lays her eggs alongside, closes the burrow, then flies away, never to return. In due course the eggs hatch and the wasp grubs feed off the paralyzed cricket, which has not decayed, having been kept in the wasp equivalent of deep freeze. To the human mind, such an elaborately organized and seemingly purposeful routine conveys a convincing flavor of logic and thoughtfulness—until more details are examined. For example, the wasp's routine is to bring the paralyzed cricket to the burrow, leave it on the threshold, go inside to see that all is well, emerge, and drag the cricket in. If the cricket is moved a few inches away while the wasp is inside making her preliminary inspection, the wasp, on emerging from the burrow, will bring the cricket back to the threshold, but not inside, and will then repeat the preparatory procedure of entering the burrow to see if everything is all right. If again the cricket is moved a few inches while the wasp is inside, once again she will move the cricket up to the threshold and re-enter the burrow for a final check. The wasp never thinks of moving the cricket straight in. On one occasion the procedure was repeated forty times, always with the same result. (Dennett, 1984, p. 11)

What makes you any different from the digger wasp? Aren't you the least bit sphexish? You might argue (and probably will!) that we're far more complex than poor *Sphex*, and don't engage in the same repetitive actions that she does. Furthermore, all the wasps behave in the same way with the cricket—it's not just a case of one wasp with obsessive-compulsive disorder. Yet human beings are infinitely variable in their behavior, we don't all do the same thing in the same circumstances. Maybe it is hard to say exactly *why* we're not sphexish, but surely we're not.

Regrettably, this rejection of sphexishness is not that great an argument. In the first place, one *can* see common behaviors among humans on large scales. Numerous psychological studies show us that in the same situation, there is a great deal of predictable, similar behavior. In the second place, even if no two individuals behave in precisely the same way in the same



circumstance, this is no proof at all that our actions are free or not determined by natural forces. Consider two **leaves falling** from a tree: no two fall in exactly the same way.<sup>9</sup> However, this hardly means that leaves freely *decide* how to fall—obviously their falling patterns are the result of differences in the wind, subtle variations in the shape of the leaves, and so on, all physical facts that have nothing to do with willing.

- 4.24 Maybe you can't see yourself falling into sphexish behavior. But perhaps that's because you're just not smart enough. Consider the wasp: she's not smart enough to see the repetition in her behavior and may well have (for all we know) a feeling of freedom, of deliberation and freely choosing to move that cricket. Still not convinced? Imagine a race of extraterrestrials whose ratio of intellect to our own is the same as the ratio of our intellect to that of *Sphex*. They're not just a little bit brighter than we are. Humans are titanically smarter than wasps (most of us, anyway). Imagine the ETs are just that much more intelligent than we are. It is perfectly conceivable that these big-brained ETs could perform little experiments on us, just like we do to *Sphex*. "**Hey Kodos**,<sup>10</sup> come here and check out these humans. Every time I do X, they do Y. Isn't that hilarious? They kill me." In the end we may just be larger, more complicated versions of the digger wasp, big lumbering robots programmed by natural selection for the reproduction of our genes, not smart enough to examine our own source code. Our psychological feelings of freedom are nothing more than a transparent, gauzy overlay on top of the coldly impersonal biological mechanism of ourselves. Perhaps we differ from *Sphex* in degree, but not in kind.



### Why There Is No Free Will, Part 3: The Dilemma Argument

- 4.25 The divine foreknowledge and regress of reasons arguments are in some ways warm-up acts. In contemporary philosophy the main objection to free will is put in terms of a dilemma, one that centers around determinism. With divine foreknowledge, God knows the facts at every point in time, past, present, and future. But the argument does not insist that God creates those facts, or that he has some sort of predestined plan for everyone and we are all marching towards our destinies. Those things could be true, but the foreknowledge problem simply relies on the idea that God surveys—that he can see—what happens at every moment. With the regress of reasons problem we get the sense that our actions are pushed from

behind. What we do is the inexorable result of those tilting balances that represent our decision-making. Just like the digger wasp, prior forces ultimately beyond our control determine what we do. It is this idea of earlier events fixing what happens in the future that is the heart of determinism. Let's examine the idea of determinism more directly, as we lead up to the dilemma argument.

### The threat of determinism

In 1814, the French mathematician **Pierre-Simon Laplace**<sup>11</sup> published a book entitled *A Philosophical Essay on Probabilities*.<sup>12</sup> A couple of pages in, Laplace writes:

4.26



We ought to regard the present state of the universe as the effect of its anterior state and as the cause of the one which is to follow. Given for one instant an intelligence which could comprehend all the forces by which nature is animated and the respective situation of the beings who compose it an intelligence sufficiently vast to submit these data to analysis it would embrace in the same formula the movements of the greatest bodies of the universe and those of the lightest atom; for it, nothing would be uncertain and the future, as the past, would be present to its eyes.

All we need is a snapshot of the universe, one so finely detailed that we could tell the position and momentum of every particle, and we could in principle figure out the entire future history of the universe and everything in it. Well, maybe we couldn't figure it out, but a vast intelligence could—perhaps a future supercomputer with full knowledge of all the forces and laws of nature. What Laplace is defending is the idea of **determinism**.<sup>13</sup> Here's a more precise definition:



*Determinism:* Given the laws of nature and a set of initial conditions, there is exactly one physically possible future.

This sounds kind of technical, so let's try to break it down with an analogy. Think about shooting a game of pool. When you **break**,<sup>14</sup> what determines where the balls go isn't random, and the balls don't decide for themselves. The 11 ball doesn't think, "Hey, I think I'll bounce off the 2 ball, hit a side rail, rattle around the corner pocket and then bounce out again." So what makes them go where they do? Well, we can list lots of factors:



- where the balls are in the rack
- the velocity of the cue ball
- the spin of the cue ball
- the angle the cue ball hits the racked balls
- the tightness of the rack
- the condition of the table felt

No doubt we could expand this list further. But you get the idea. These factors are the *initial conditions* of the break. When these vary, the balls wind up going in different directions after the break. Good pool players can replicate and control the initial conditions—they hit the cue ball with the same speed, spin, and at the same angle time and again. There's one other key factor that isn't on the list, one that is essential to shooting decent pool: the laws of nature. For example, laws concerning momentum, force, ball and rail elasticity, rolling friction, angle of incidence equaling the angle of reflection, all affect where those balls go. These don't change. However, if you have no clue about how any of these physical laws will affect the motion of pool balls, you aren't going to be a very good player. Thus there are two things that determine where the balls go after the break: the initial conditions of the break, and the laws of nature.

4.27 Determinism is basically the far-reaching global thesis that the entire universe is like a gigantic game of pool. The initial conditions of the universe are the physical facts at the moment of the Big Bang. Those facts, coupled with the laws of physics, determine everything that has happened since. The universe is simply in the process of unfolding, and it is all just forces and little pool balls bouncing off of each other. We ourselves are no more than physical creatures, made up of physical parts, subject to the same laws as anything else in the universe. Our brains too are electrochemical mechanisms and their operation is simply the result of prior states of the universe and the laws of nature.

4.28 The threat that determinism poses to free will is this: determinism states that there is exactly one physically possible future. If you have free will, then you have a choice, you could do either action  $x$  or action  $y$ . In other words, if you are free, then you somehow decide what the future is going to be like, whether it contains the performance of  $x$  or the performance of  $y$  instead. If you are free, then the future is open. If determinism is true, then the future is closed; there is only one way things could go. If you perform action  $x$ , then that was the only thing that you could have done, no matter how much it felt like you could have done something else. The

feeling that you could have done otherwise was no more than an illusion, self-deception of some kind. The view that free will and determinism are in conflict is called “incompatibilism.”

*Incompatibilism:* Either we have no free will or determinism is false.

“C’mon,” you say. “What kind of a dope do you think I am? I’ve heard that modern physics has disproved determinism, that some things just flat-out happen for no reason at all, that they are uncaused and undetermined by what happened before.” Good point. It is true that the mainstream interpretation of the equations of quantum physics is that some things happen randomly. This is a truly difficult view to wrap one’s mind around, but the idea is *not* that we can’t explain or discover what caused certain events, but literally that they have no cause at all. The future could contain event  $x$ , or it could contain event  $y$ ; either is physically possible. A good example of such an event is radioactive decay. There’s even a website at a Swiss physics lab that uses the randomness of the atomic decay of Krypton-85 to generate authentically **random numbers**.<sup>15</sup> Here’s a nice passage on randomness from that website:

Even though we’re absolutely certain that if we start out with, say, 100 million atoms of Krypton-85, 10.73 years later we’ll have about 50 million, 10.73 years after that 25 million, and so on, there is no way *even in principle* to predict when a given atom of Krypton-85 will decay into Rubidium. We can say that it has a fifty/fifty chance of doing so in the next 10.73 years, but that’s *all we can say*. Ever since physicists realised how weird some of the implications of quantum mechanics were, appeals have been made to “hidden variables” to restore some of the sense of order on which classical physics was based. For example, suppose there’s a little alarm clock inside the Krypton-85 nucleus which, when it rings, causes the electron to shoot out. Even if we had no way to look at the dial of the clock, it’s reassuring to believe it’s there—it would mean that even though our measurements show the universe to be, at the most fundamental level, random, that’s merely because we can’t probe the ultimate innards of the clockwork to expose its hidden deterministic destiny.

But hidden variables aren’t the way our universe works—it really *is* random, right down to its gnarly, subatomic roots. In 1964, the physicist John Bell proved a **theorem**<sup>[16]</sup> which showed hidden variable (little clock in the nucleus) theories inconsistent with the foundations of quantum mechanics. In 1982, Alain Aspect and his colleagues performed an experiment to test







**Bell's theoretical** result and discovered, to nobody's surprise, that the predictions of quantum theory were correct: the randomness is inherent—not due to limitations in our ability to make measurements.<sup>[17]</sup> So, given a Krypton-85 nucleus, there is no way whatsoever to predict when it will decay. If we have a large number of them, we can be confident half will decay in 10.73 years; but if we have a single atom, pinned in a laser ion trap, all we can say is that there's even odds it will decay sometime in the next 10.73 years, but as to precisely when we're fundamentally quantum clueless.

While these facts are enough to undermine the global thesis of determinism stated earlier, they do not imply that every event is random, just that some are. Determinism is the global thesis that *everything* is determined; to reject it we need only show that *some* events are not determined. Nevertheless, even atomic physicists agree that there are still plenty of events whose occurrence is the inexorable outcome of prior forces. Quantum randomness tends to wash out at the macro level. The rolling of those pool balls is still determined by the initial conditions of the break and the laws of nature. In fact, one way to understand ordinary physical and chemical laws is that they just are certain kinds of generalized descriptions of causal regularities; that is, if everything were random there would be no physical laws. So it looks like events are going to fall into one of two groups: those that are random, like the radioactive decay of Krypton-85, and those that are determined. Is any of this enough to save free will? Can quantum randomness somehow provide for our freedom?

### Will randomness make us free?

- 4.29 It's awfully hard to see how it can. If an action is undetermined, if it occurs randomly, then its happening is a matter of chance or luck, and not a free action. The whole idea behind free will, as we have defined it, is that we have a choice in what we do, that we have a sort of volitional control over our thoughts and actions. But random actions aren't under the control of anything. If our actions are the amplified result of some random quantum event, then our actions would be surprising and spontaneous, like **Tourettic outbursts**<sup>18</sup> or **epileptic seizures**.<sup>19</sup> This sense of chance, random action is more indicative of diminishing control, a loss of freedom, than a sign that we are free. We might be unaware of the real causes of our actions in a deterministic world, and thereby still feel free, but how could we even *feel* that our choices were free ones if they are as random as atomic decay?





Perhaps even worse is this apparent consequence: if an event is truly random, then it might not have occurred given precisely the same initial conditions and laws of nature. For example, if your reading this chapter is the result of randomness, then when you decided to read it (assuming you still are!) all of your deliberative decision-making and weighing of the pros and cons could have been exactly what they in fact were right up to the moment of choice and yet you did not read it. Such a consequence is truly weird—if decision-making is infected with randomness, it suddenly becomes irrational, arbitrary, and capricious. It no longer looks free. In a nutshell, random action is not the result of anything, and so not the result of free will. <sup>4.30</sup>

We have now assembled the pieces—determinism, randomness, incompatibilism—needed to build what may be the most powerful argument against free will. <sup>4.31</sup>

#### The dilemma argument against free will

1. Either determinism is true, or it is false. (trivial)
2. If determinism is true, then you can never choose to perform one action instead of another. (incompatibilism thesis)
3. If you can never choose to perform one action instead of another, then you do not have free will. (from the definition of free will)
4. Therefore, if determinism is true, no one has free will. (from 2, 3)
5. If determinism is false, then some events are random (those not random are determined). (premise)
6. If you do something randomly, then it is not the result of choice. (premise)
7. Therefore, an action that is random is not the result of free will. (from 6 and the definition of free will)
8. Therefore, if determinism is false, there is no free will. (from 5, 7)
9. Therefore, there is no free will. (from 1, 2–4, 5–8)

Either determinism is true, or it is false. If it is true, we have no free will. <sup>4.32</sup>  
If determinism is false, we have no free will. In short, any way you slice it,

no matter what you think about determinism, we're not free. At this point you might well be thinking, "Oh well. So I don't have free will. It's a bummer, but what am I going to do? Nothing. Just another illusion shattered by reading philosophy." Whoops, maybe that's going too far. But you might be thinking that it's not that big a deal to have no free will. We're not free, but so what?

### Free will and moral responsibility

- 4.33 One big reason that people have cared about free will is its connection to moral responsibility. Suppose you and the supervillain The Pusher are in a 10-story apartment building. It is a beautiful day, and you have opened the window to get some fresh air. You're standing at the window, enjoying the view, when The Pusher comes up behind you and suddenly pushes you out. You plummet to the sidewalk below, and land squarely on a hapless pedestrian, plowing into him at about 27 mph. Fortunately for you, especially considering the day you've had so far, the pedestrian was hugely fat, and cushioned your fall. You get up and walk away unharmed. Unfortunately for the pedestrian, you killed him. Should you be arrested for murder? No? How about manslaughter? Negligent homicide? Something? No doubt you'll complain to the arresting officers that you didn't have any choice in the matter, that you were pushed out of the window, and once gravity had you in its tenacious grip, there was not a thing you could do. True, all true. Oh? You're going to blame The Pusher? Go on, send the cops upstairs. He'll tell them just what you did: he had no choice in the matter, his pushing you was either determined or random, and either way there was not a darn thing he could do about it. The Pusher refers the officers to the dilemma argument above. Really, he's not any more responsible for that poor pedestrian than you are. If you're not responsible because you had no choice in the matter, then neither is The Pusher—and for exactly the same reason.
- 4.34 See, if you're not free, then there was *never* anything else you could do, no matter *what* you do. Either forces outside of your control determine every action you perform, in which case you never had a choice, or your actions are the result of randomness, in which case you never had a choice. Either way, you were never free to do anything differently; there was nothing you could have done to produce a different outcome. In other words, every single thing you do is exactly like getting shoved out of the window. You're not free to do otherwise than you did. So if you think that prosecuting

you for killing that pedestrian is unjust, then prosecuting you for *any* action is unjust. The preceding bit of reasoning presupposes the following principle:

*The principle of alternate possibilities:* you are morally responsible for an action  $x$  only if at the time you did  $x$ , there was alternate possible action  $y$  that you could have done instead.

This extremely appealing principle was widely accepted until Harry Frankfurt proposed some **counterexamples** to it in 1969.<sup>20</sup> Frankfurt argued that there were cases in which one was intuitively still responsible for an action, even when one's action was completely unavoidable. The basic idea behind his counterexamples is that that of a manipulator waiting in the wings who will guarantee that you do  $x$ , should you not choose to do  $x$  on your own.

Here's an example. Suppose that Kathy is deciding whether to poison her boss. The mad scientist Dr Zorg can't stand the SOB either, and is fervently hoping that she will. Dr Zorg isn't taking any chances; he's going to make sure that Kathy does the deed. Yet he's subtle in his manipulations, and Kathy has no idea that Dr Zorg even exists. Zorg's plan is to use his newly invented Mind Control Machine. The MCM is a masterpiece of cognitive engineering by which he can not only inspect Kathy's beliefs, thoughts, emotions, and desires, but change the strength of those desires. Dr Zorg can turn the dials on the machine and increase Kathy's desires or lessen them. As she deliberates about whether to poison the boss, Dr Zorg keeps a close eye on the proceedings; he watches her reasoning process and assesses the strength of her desires. While Dr Zorg would prefer that Kathy choose to poison the detested boss on her own, should he detect that her desires to poison just aren't sufficiently strong to overcome her moral compunctions and fear of the law, he will turn the knobs on his Mind Control Machine until the desire to kill overwhelms everything else and Kathy whacks her boss. 4.35

There are only two possible futures in this scenario. Future (1): Kathy decides to poison the boss, Dr Zorg does nothing, and Kathy poisons the boss. Future (2): Kathy decides *not* to poison the boss, Dr Zorg uses the MCM to give Kathy an overwhelming desire to kill the boss, and Kathy poisons the boss. Let's just assume that Kathy is morally responsible in future (1), where she decided to poison and did so. In ordinary cases of supposedly free action someone decides to do  $x$ , is not coerced by others, 4.36



does  $x$ , and is responsible for it. That's just what we have in future (1). However, surely Kathy is not responsible in future (2), where she decided against poisoning but was forced to by Dr Zorg. Here is Frankfurt's important discovery: in neither case could Kathy have done otherwise than she actually did. Kathy was going to poison the boss no matter what; there was no possible alternative action that she could have performed instead. Nevertheless, when Kathy decided to poison, and was uncoerced by Dr Zorg, she is, by hypothesis, morally responsible. Therefore the Zorg scenario is a case in which someone is morally responsible for an action, despite the fact that at the time the action was performed there was no alternate possible action that she could have done instead. Thus the principle of alternate possibilities is false. The existence of a possible alternative action to what one actually did is not a requirement for moral responsibility.

4.37 If the principle of alternate possibilities is false, then perhaps the lack of free will does *not* mean that no one is morally responsible for her actions. Of course, even if that principle is false, we still need to explain what's happening in the pushing out of the window case discussed previously. Why should The Pusher be on the hook for pushing you, yet you're not responsible for killing the pedestrian? If the principle of alternate possibilities were true, then neither of you is responsible. Since that principle is apparently false, we are back to square one. Plenty of philosophers have tried to plug this gap, with a variety of different proposed moral principles. (This is how it goes in philosophy: ever more precise and careful principles and definitions are needed to avoid counterexamples.)

4.38 Frankfurt himself suggested that *one is not morally responsible for what one does if one does it only because one could not have done otherwise*. Here's how Frankfurt's revised principle is supposed to work. When Kathy decides not to poison her boss, and Dr Zorg forces her to do so with his Mind Control Machine, she is not morally responsible for her action because she poisoned the boss only because she could not have done otherwise. Dr Zorg made sure that she could not have done otherwise. But when Kathy decides to poison her boss and follows through with the plan, she is morally responsible—Frankfurt's revised principle gets her off the hook only if she poisoned *only because* she could not have done otherwise. The assumption of the Kathy/Dr Zorg case is that if Kathy chooses to poison, then it was a free choice. When she chooses on her own to poison, it wasn't because Dr Zorg coerced her; it was because she hated her boss. It looks like Frankfurt's revised principle gives the right answer in the Kathy/Dr Zorg case.

What about our original case of The Pusher pushing you out of the window? You're not responsible for killing the pedestrian after he pushed you out of the window; the only reason you killed the pedestrian is because you could not have done otherwise than crush the poor sap with your speeding body. But wait—it looks like he's still not responsible for pushing you out of the window. Remember, his act of pushing you was either determined (an inexorable consequence of the pool-balls of the universe that The Pusher could have done nothing to prevent) or random (a spontaneous quantum belch that he could have done nothing to prevent). There's a powerful argument to be made that the only reason The Pusher pushed you was because he could not have done anything else, despite his delusions of free choice. We might add that he also wanted to push you, but The Pusher's wants are also either determined or random and so he only has the wants he does because he could not have done otherwise. Thus it looks like a lack of free will still kills moral responsibility. 4.39

What's more, there are complications with omissions instead of acts. 4.40 Often we are held morally responsible for failing to take action, not just for taking the wrong actions. For instance, suppose you are a mechanic. You inspect a car and do not fix or even notify the owner that his brakes are about to fail. It seems like you did something morally wrong. On the other hand, suppose you attempt to fix the brakes, and reasonably believe that you have successfully repaired them. However, unknown to you or the Guild of Auto Mechanics the brakes are inherently maldesigned and irreparable. In this case you did the best you could with the brakes, and it is not your fault when they fail. Frankfurt's revised principle only addresses when one is not morally responsible for acts, and says nothing about omissions. Thus some supplementary principle will be needed to address moral responsibility and omissions. Of course, if you have no free will, then when you fail to perform an action, your failure is—like everything else—either determined or random, and your lack of action is unavoidable.

Subsequent philosophers have proposed all sorts of moral principles 4.41 with various amendments, codicils, revisions, supplements, and riders designed to escape the problems we have been discussing, but these matters get very complicated very fast, and here we're just sketching the landscape, not hacking through every jungle. Nevertheless everyone agrees that if the dilemma argument against free will is right, there is at least a *prima facie* case that you are never morally responsible for anything you do. You may feel liberated by this result or frightened by it, but either way you should at least be surprised and a bit disturbed. So now what do we do?

## Agent causation

4.42 One way out of the dilemma argument is to deny premise (5), the assumption that if determinism is false, then some events are random (those not random are determined). People who reject premise (5) defend *agent causation*. The idea of agent causation is that the alternative to determinism isn't randomness at all, but our own free will. How does this proposal escape the evil clutches of the determinist without just assuming the very thing we're trying to prove? That's a good question. The answer is that human beings, in fact any willful agent, can just spontaneously begin a new chain of causation in the world, one that has no causal history prior to the act of willing. As Aristotle wrote, "thus, a staff moves a stone, and is moved by a hand, which is moved by a man" (*Physics*, VIII, 5, 256a, 6–8).<sup>21</sup> Your decision to read this chapter was literally caused by nothing outside of yourself. You decided, chose, as a sort of unmoved mover, and then the reading began. Through our freedom we are in a way outside of the causal order of the world; our choices are undetermined, but not precisely random either. Our choices are free, picked by ourselves as free agents, neither determined by the outside world nor arbitrary happenings.



4.43 Prominent philosophers have defended agent causation, including **George Berkeley**<sup>22</sup> and **Thomas Reid**<sup>23</sup> in the eighteenth century, and **Roderick Chisholm**<sup>24</sup> in the twentieth century. It remains a minority view, however, because it is so difficult to give a really convincing and detailed explanation of how this sort of causation is supposed to work.



4.44 *Objection 1: Mystery* The first problem for agent causation is the mystery objection. You do things for a reason. If you raise your arm, you do so because you wanted to wave hello to a friend, or signal to the waiter, or salute the captain, or lift the comb to your hair, or put on your hat. If someone asked you why you raised your arm and the honest and literal answer was "no reason," one might wonder if you really were in control of your bodily movements. Perhaps you have neurological problems. When we explain the behavior of others, we do so in terms of the reasons they have for acting. Why did the **Grinch steal Christmas**?<sup>25</sup> Answer: he hated the Whos. The fact that the Grinch hated the Whos was the reason he stole Christmas, and moreover that reason is the causal explanation of his stealing Christmas. That is, the reasons you have for acting are generally the causes of action. You wanted to wave hello to a friend, and that was the cause of you raising your arm the way that you did. There is a cause





(in terms of a reason) for you raising your hand. Is there a reason you had that reason?

You act for reasons. Either (a) those reasons for acting are due to causes outside of you, or (b) you choose which reasons are important to you and to what degree. If (a), and your reasons for acting are the result of outside causes, then agent causation is obviously wrong. Agent causation supposes that you are the first cause, the originator of causal chains, insulated from the larger world. If we pick (b), and you choose your reasons for acting, then presumably you had reasons for that choice as well, and reasons for *that* choice, and we are off to an infinite regress of reasons for acting, as we saw earlier. You have to have an infinite number of reasons to perform any action, a terribly challenging demand. Yet if you spontaneously create your reasons for acting out of thin air, then it smells suspiciously capricious and arbitrary. Randomness, of course, is not freedom. We're back to the problems we looked at earlier in this chapter—either your reasons for acting are due to causal forces outside of you, you have an infinite chain of reasons for acting to do anything, or your reasons are random and not the exercise of free will. The mystery is how agent causation can escape the earlier arguments against freedom at all.

*Objection 2: Magic* Agent causation insists upon a sort of causation that is connected to the rest of the physical world in a most peculiar way. Humans aside, the universe is filled with events that cause other events, which cause other events, in a complex kaleidoscope of interaction. Natural science is tasked with discovering the laws of nature that govern these interactions and so allow us to predict future events. Knowing what we know about electromagnetism we can predict that passing a current through a copper wire wound around a magnet will increase its magnetism. Agent causation insists that human beings stand apart from the web of causation that holds everything else; our actions are free and uncaused. We are only partly outside the causal order of the physical world, however. While our actions are uncaused, we can cause things, we can begin whole new chains of causation with lasting effects outside of ourselves. The universe does not leave its mark upon us, but we can leave our mark upon it. Surely for agent causation our choosing is beyond the reach of science to treat; there can be no psycho-physical laws or rigorous predictions of our behavior. We are magicians, casting spells, with causal powers outside the domain of science.

If agent causation is committed to the view that human beings have magical abilities, it faces a whole host of hard questions. Does every

decision-making animal have agent-causal powers? Or are humans special? Is agent causation driven to the controversial view that persons are not completely physical (since we have scientifically indescribable magic powers)? What's the relationship between ordinary event causation and agent causation? If our agent-caused decisions are themselves uncaused, then what's the difference between agent causation and plain old random action? Such troubling questions have made most philosophers leery of agent causation.

### Compatibilism

- 4.48 Without doubt the most prominent response to the dilemma argument is to reject premise (3), namely, if you can never choose to perform one action instead of another, then you do not have free will. "Wait," you say, "Premise three comes straight from the definition of 'free will;' how can anyone deny *that*?" The answer is by rejecting the definition itself. This is the strategy of *compatibilism*. Compatibilists concede that the dilemma argument against free will is sound—the knockout blow against free will. We just don't have any of that sort of freedom. Yet, they say, there is a kind of freedom we *do* have, and this freedom is compatible with determinism. All we need to do, compatibilists argue, is redefine "free will." The kind of free will under attack so far in this essay has traditionally been called libertarian free will. Just to remind you:

*Libertarian free will:* Your will is free just in case you can choose to perform one action instead of another.

Here's the compatibilist's new and improved definition of "free will":

*Compatibilist free will:* Your performance of an action is free just in case it is the result of your beliefs, desires, and intentions.

The central idea behind libertarianism is that you have a choice in what you do. Compatibilists agree with the dilemma argument that you never have a choice in what you do, you're never libertarian free. Nevertheless, they think, there is a plausible and powerful sense in which you're free: you're free as long as you're doing what you want. That's the compatibilist idea. What exactly is doing what you want compatible with? Why, deter-



minism. Suppose all of your desires are the result of forces outside of you, going back to the initial conditions of the universe itself. Given those initial conditions and the laws of nature, you were bound to have the desires and beliefs that you do. However, as long as you are acting on your desires, doing what you want, in accordance with your beliefs, then you are free. When your actions are random or the result of randomness, you are still unfree. If you do something randomly, then your action isn't the result of your beliefs and desires. It is literally the result of nothing. Therefore it's not a free action according to compatibilism.

The compatibilist is quick to note that this idea of freedom fits well with our everyday concerns about being free. Why do you want to avoid prison? It's not because you don't have choices, or that at any time you never have a choice between doing an action  $x$  and an action  $y$ . Ignoring the dilemma argument for a moment, it seems that you have lots of choices in prison, at every moment: to open your eyes or close them; what to think about; whether to shift your weight to your right foot or your left. No, the reason you don't want to go to prison is because *you can't do what you want* in prison. That's the way in which prison robs you of your freedom. Freedom is acting on your desires, beliefs, and intentions, and prison prevents you from acting in that way.

*Objection 1: Too little freedom* One objection to compatibilism is that it means that the plain ordinary facts about the world imply that we're still not free. Suppose what you want to do right now is lie on a Caribbean beach, deciding whether to have the lobster or the cracked crab for lunch. But you can't act on those desires; you're not in the Caribbean and can't afford either lobster or cracked crab. The unfortunate state of your finances prevents you from acting on your tropical desires and intentions. Since compatibilist freedom is doing what you want, you're still not free. In fact, freedom may be just as impossible under compatibilism as it was under libertarianism. If you desire immortality (or to breathe under water, to fly by flapping your arms, or to have zero mass), then you want the impossible, and you could never be free to act on your desires. Compatibilism was supposed to save free will from the dilemma argument; we gave up on the unobtainable libertarian free will in favor of humble compatibilist freedom. But it looks like compatibilism is no better in securing our freedom than libertarianism was. We're still not free. The challenge for the compatibilist is to explain how a lack of omnipotence does not entail a lack of freedom.

- 4.51 *Objection 2: Too much freedom* Another objection to compatibilism is that cases where we are intuitively unfree come out as free action under compatibilism. For example, suppose a mugger points a gun at you and demands your money or your life. After due consideration, you hand over your wallet. By giving the mugger your wallet, you acted on your greatest desire, didn't you? Wasn't your desire to give him your money greater than your desire to get killed? Of course it was! Therefore you did what you wanted, you acted on your desires and beliefs, and so according to the compatibilist giving your money to a mugger is a free action. The problem is that compatibilism then looks absurdly inclusive—everything you do is free, no matter what. You're every bit as free in prison as you are on the outside. A nice slogan for a police state, but not too convincing otherwise. A paragraph ago it seemed that we were never compatibilist free, but now it looks like we are inevitably compatibilist free. That doesn't seem to get things right either. The challenge for the compatibilist is to explain coercion in such a way that coerced acts aren't free ones, even though apparently you're always acting on your desires, even at gunpoint.
- 4.52 Intuitively, sometimes our actions are free ones, and sometimes they are not. If compatibilism is to be an adequate theory of free will, it must be capable of sorting these things out. One way a compatibilist could respond to the *too little freedom* objection is to argue that freedom comes in degrees. It's a mistake to think that we're either free or not free, end of story. We can be partly free and partly unfree, more free and less free. So sure, you're not free to kick back on that Caribbean beach right now. But you might still be free to act on plenty of your other desires—you can get yourself a cup of coffee, keep reading this chapter, take a nap, or whatever other actions are within your power. Notions of political and economic freedom tie nicely into compatibilist free will here: the fewer governmental or fiscal constraints on your behavior, the more free you are to do what you want, which is, of course, the essence of compatibilism.
- 4.53 What about the *too much freedom* objection? One avenue for the compatibilist is to draw a distinction between those desires that are a part of one's own intrinsic character and those that are the result of manipulation or coercion. If you give your money to a beggar because you are an inherently sympathetic and generous person, then it was a free action. You acted on beliefs, desires, and intentions that were a part of the sort of person that you are, and in that sense they were *your* desires. By acting on your desires, you acted freely. If you give your money to a mugger because he is holding a pistol to your head, then it was not a free action. While you

desired to give your money to the mugger (given the unpleasant alternative posed by the gun), that desire did not arise out of the character traits that make you who you are. Instead, the mugger forced the desire on you. It is not a matter of determinism, since compatibilists are happy to admit that your desires may be determined by outside forces no matter what. Your character traits are determined too. However: somebody else does not coerce them, and that's the key difference.

Compatibilists will have to do more fancy footwork than the quick 4.54 sketch of the preceding paragraph, though. Suppose that right now you do not desire a doughnut. Here are two different ways someone could get you to want one: (1) she points a gun at your head and demand that you eat the damn doughnut or else; (2) she waves a box of warm, freshly baked Krispy Kremes under your nose. Obviously, compatibilists will write off the first option as intentionally coerced, forced, and unfree. What about the second? Surely the fiend is amping up your desires for a doughnut when she wafts those sugary delights in front of you. Moreover, she is intending to change your desires; perhaps she hates eating doughnuts alone and she's trying to get you to join her. It doesn't seem right, however, to conclude that in case two your doughnut-eating was unfree and coerced. In case one she is intentionally modifying your desires via gun and in case two she is intentionally modifying your desires via doughnut. In both cases you wind up wanting a doughnut and eating one. Compatibilists have to find a plausible way to distinguish between the two cases if they hope to escape the *too much freedom* objection.

## The Feeling of Freedom

If we don't have free will or, at least, if we don't make free choices in the 4.55 libertarian sense, then why are we so convinced that we *are* free? In 1888, Friedrich Nietzsche argued that our belief in free will is the residue of our religious heritage, writing, "men were thought of as 'free' so that they could become *guilty*: consequently every action *had* to be thought of as willed, the origin of every action lying in the **consciousness**."<sup>26</sup> In his view, a religious insistence on moral responsibility led to the invention of free will.

Recent scholarship in neuroscience and experimental psychology sug- 4.56 gests a different answer, namely that our feelings of freedom are more neurological than moral in origin. Our brains organize and interpret our



experience to make a whole, unified human life. They are not mere passive receptors for the data of the senses. The creative work of brains is exposed when there are failures of one kind or another; reading through neurological case studies gives a cornucopia of examples. For example stroke victims who suffer from left side neglect lose the entire left side of the world, for them the very idea of “**leftness**” has lost its meaning.<sup>27</sup> They will shave only one side of their face, not recognizing that there is an entire side unshorn on the left. Such persons won’t pick up an object on their left, and draw clocks like half-circles, all while failing to recognize or even sincerely denying that anything is amiss.



4.57 Benjamin Libet and subsequent researchers have explored the **neuroscience of free will**.<sup>28</sup> It turns out there is a difference in the brain between a freely voluntary act, such as you consciously lifting your arm, and involuntary motions, such as your arm jerking up as a result of cerebral palsy, Parkinsonism, Huntington’s chorea, Tourette’s, etcetera. Voluntary—but not involuntary—actions are preceded by a specific electrical change in the brain called the readiness potential. **Libet** asked test subjects to move their wrist at a time of their own choosing and to note the precise time when they decided to do so.<sup>29</sup> What he discovered is that the reported intention to move one’s wrist occurred, on average, 200 milliseconds before the wrist-moving act itself. However, the electroencephalographic measurements of the motor cortex show that the readiness potential ramps up 350 milliseconds before the time of the reported intention. That is, Libet’s experiments showed that the readiness potential in the brain increases prior to the subject’s awareness of a conscious will to move.



4.58 Libet argued that since the mental beginnings of an act happen before the feeling of willing the act, this proves that voluntary actions are initiated unconsciously, and the conscious mind comes on board after the fact. If Libet is right, his results give potent ammunition to critics of free will. If conscious decision-making is no more than the brain’s window-dressing on the foregone conclusion of the unconscious mind, then our “decisions” play no causal role at all. It would be a mistake to even refer to our actions as the result of conscious, free choice.



4.59 In a similar vein, the psychologist **Daniel Wegner** has recently argued that the internal sensation or perception of conscious control over our actions is an illusion.<sup>30</sup> Wegner claims that people experience conscious will when they interpret their own thought as the cause of their action. But, he argues, the feeling of conscious will has a rather loose and tenuous con-

nection to the actual physical mechanisms that cause action. For example, there are cases in which people experience a lack of will over actions they cause. In the nineteenth century fad of séances, people sincerely believed that the tables around which they sat were raised off the floor and moved about by spirits from beyond the grave. In one famous experiment, the scientist Michael Faraday placed force measurement devices between the séance participants' hands and the table. He showed that it was the hands that moved the table, and not the other way round. Of course, such scientific proof failed to convince the participants, who felt most sincerely that they had not moved the table. Science has an uphill fight against sincere feelings. Ouija boards and spirit channeling provide similar examples of people performing actions that their conscious minds do not recognize as their own, as do schizophrenics, who do not interpret their own thoughts as coming from themselves. There are also cases in which people believe themselves to be author of actions and events that they have absolutely nothing to do with, as in the case of certain mental illnesses in which sufferers believe they are the ones who caused events in the remote past, or that their thoughts have faraway effects.

Wegner concludes that such results ought to lessen our confidence that our feelings of conscious will or sensations of freedom have very much to do with our actions. Sometimes we do things that we do not think we did, and sometimes we think we did things that we could not have done. Our internal feelings about our abilities aren't very accurate; feeling free proves nothing at all. The mistake we make, according to Wegner, is that we confuse correlation with causation. We're aware of a conscious thought or intention to perform an action, then we observe the action happening, and so we conclude that our conscious thought caused the action to occur. Really, though, it was unconscious mental processes that did all the work—they caused both the conscious intentions and the action. The inferred connection between consciousness and action is the superfluous step. 4.60

## Conclusion

When amputees have **phantom limbs** they continue to feel sensations in their missing limbs, feeling pain in a hand that plainly doesn't exist, or a cramp in a missing foot.<sup>31</sup> The feelings are certainly real, and in some cases phantom pain has driven amputees nearly to suicide. Nevertheless, a 4.61



missing hand just *can't* hurt; there's nothing there *to* hurt. Even though there is no longer a limb, the sufferer's brain continues to map an intact body, stubbornly refusing to update some important data. It may be that free will is, like an itch in a nonexistent hand, a persistent and troubling illusion that our brains have built for us. Like the amputee who feels the phantom limb long after knowing that there is no limb there at all, we may well continue to feel free despite the most persuasive arguments to the contrary.

### Annotated Bibliography

- Dennett, Daniel (1984) *Elbow Room: The Varieties of Free Will Worth Wanting* (Cambridge, MA: MIT Press). The first of Dennett's fine books on free will, in which he defends compatibilism and discusses the digger wasp.
- d'Holbach, Paul Heinrich Dietrich (1770) *System of Nature*, full text available at [www.gutenberg.org/ebooks/8909](http://www.gutenberg.org/ebooks/8909), accessed May 15, 2012. Baron d'Holbach's materialist treatise. In Chapter 9 of Book 1, he defends determinism and argues that there is no free will as a result.
- Edwards, Jonathan (1754) *A careful and strict enquiry into the modern prevailing notions of that freedom of will which is supposed to be essential to moral agency, vertue and vice, reward and punishment, praise and blame*, full text available at [www.earlymoderntexts.com/pdf/edwafree.pdf](http://www.earlymoderntexts.com/pdf/edwafree.pdf). Edwards argues against libertarianism by providing the decision-making problem and regress argument.
- Hobbes, Thomas (1656) *The questions concerning liberty, necessity, and chance: clearly stated and debated between Dr. Bramhall, Bishop of Derry, and Thomas Hobbes of Malmesbury*, full text available at <http://archive.org/details/englishworkstho00hobbgoog>, accessed May 15, 2012. Hobbes's famous debate with Bramhall over free will, with Hobbes providing an early statement of compatibilism. Perhaps the opening salvos in the modern debate over free will.
- Hume, David (1748) *An Enquiry Concerning Human Understanding*, full text available at [www.earlymoderntexts.com/pdfbits/he2.pdf](http://www.earlymoderntexts.com/pdfbits/he2.pdf), accessed May 15, 2012. In Chapter 8, Hume gives his best-known, and most accessible, account of free will. His defense of compatibilism was the gold standard for two centuries.
- Kane, Robert (ed.) (2002) *Free Will* (Oxford: Wiley-Blackwell). A fine collection of influential essays on free will, primarily from the twentieth century.
- Libet, Benjamin (2004) *Mind Time: The Temporal Factor in Consciousness* (Cambridge, MA: Harvard University Press). Libet's summary of his experiments concerning the subconscious causes of supposedly volitional actions.



- Manson, Neil (forthcoming) *This is Philosophy of Religion: An Introduction* (Oxford: Wiley-Blackwell). Contains a more in-depth discussion of the divine fore-knowledge problem.
- Ramachandran, V. S. and Sandra Blakeslee (1998) *Phantoms in the Brain* (New York: William Morrow). A book on popular neuroscience, with fascinating case studies, including a fine discussion of the neurology of phantom limbs.
- Reid, Thomas (1788) *Essays on the Active Powers of Man*, full text available at [www.earlymoderntexts.com/reac.html](http://www.earlymoderntexts.com/reac.html). In Chapter 4, Reid rejects compatibilism and presents his classic defense of agent causation.
- Wegner, Daniel M. (2002) *The Illusion of Conscious Will*. Cambridge, MA: MIT Press. Skepticism about free will on the basis of contemporary cognitive science.

## Online Resources



- 1 A discussion of positive and negative liberty in the context of political philosophy: <http://plato.stanford.edu/entries/liberty-positive-negative/>
- 2 A discussion of the film *Terminator 2*, which explores issues of free will, and is the source for the line “the future is not set; there is no fate but what you make for yourself”: [http://en.wikipedia.org/wiki/Terminator\\_2](http://en.wikipedia.org/wiki/Terminator_2)
- 3 The passage in Boswell’s *Life of Johnson* in which Johnson is quoted as saying “all theory is against the freedom of the will; all experience is for it”: [http://books.google.co.uk/books?id=TmShu9cK3IUC&pg=RA1-PA169&dq=All+theory+is+against+freedom+of+the+will+all+experience+is+for+it+boswell&hl=en&ei=DTTVTdTrBIzqgQfTusj\\_Cw&sa=X&oi=book\\_result&ct=result&redir\\_esc=y#v=onepage&q=All%20theory%20is%20against%20freedom%20of%20the%20will%20all%20experience%20is%20for%20it%20boswell&f=false](http://books.google.co.uk/books?id=TmShu9cK3IUC&pg=RA1-PA169&dq=All+theory+is+against+freedom+of+the+will+all+experience+is+for+it+boswell&hl=en&ei=DTTVTdTrBIzqgQfTusj_Cw&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=All%20theory%20is%20against%20freedom%20of%20the%20will%20all%20experience%20is%20for%20it%20boswell&f=false)
- 4 Aristotle’s book *On Interpretation*. In part 9 he discusses statements about the future and gives his sea-battle example: <http://classics.mit.edu/Aristotle/interpretation.1.1.html>
- 5 A discussion of the life and works of Aristotle, arguably the greatest thinker in human history: <http://plato.stanford.edu/entries/aristotle/>
- 6 A sophisticated overview of nonclassical logics, including those that allow propositions with no truth values: <http://plato.stanford.edu/entries/logic-manyvalued/>
- 7 Quotations from *Animal House*, including Dean Wormer’s observation that Bluto Blutarsky’s grade point average was 0.0: [www.imdb.com/title/tt0077975/quotes?qt=qt0479924](http://www.imdb.com/title/tt0077975/quotes?qt=qt0479924)
- 8 Video of a great golden digger wasp burying a paralyzed cricket: [www.youtube.com/watch?v=5t2p4ukzL74](http://www.youtube.com/watch?v=5t2p4ukzL74)

- 9 Some thoughts on the freedom of falling leaves, from the writer Ambrose Bierce: [http://thinkexist.com/quotation/decide-v-i-to\\_succumb\\_to\\_the\\_preponderance\\_of\\_one/288637.html](http://thinkexist.com/quotation/decide-v-i-to_succumb_to_the_preponderance_of_one/288637.html)
- 10 Kang and Kodos, the irrepressible space aliens from *The Simpsons*: [http://en.wikipedia.org/wiki/Kang\\_and\\_Kodos](http://en.wikipedia.org/wiki/Kang_and_Kodos)
- 11 A biography of Pierre Simon Laplace, a great and inventive mathematician. As a human being, though, “That Laplace was vain and selfish is not denied by his warmest admirers; his conduct to the benefactors of his youth and his political friends was ungrateful and contemptible; while his appropriation of the results of those who were comparatively unknown seems to be well established and is absolutely indefensible.”: [www.maths.tcd.ie/pub/HistMath/People/Laplace/RouseBall/RB\\_Laplace.html](http://www.maths.tcd.ie/pub/HistMath/People/Laplace/RouseBall/RB_Laplace.html)
- 12 The full text of Laplace’s *A philosophical essay on probabilities*: <http://archive.org/details/philosophicaless00lapliala>
- 13 A detailed discussion of determinism, especially as it is understood in the philosophy of science: <http://plato.stanford.edu/entries/determinism-causal/>
- 14 A pool break: [www.youtube.com/watch?v=\\_S8FhWNBkHM](http://www.youtube.com/watch?v=_S8FhWNBkHM)
- 15 A Swiss physics lab that provides genuinely random numbers, generated by atomic decay: [www.fourmilab.ch/hotbits/how.html](http://www.fourmilab.ch/hotbits/how.html)
- 16 A sophisticated discussion of John Bell’s theorem regarding hidden variables in quantum mechanics: <http://plato.stanford.edu/entries/bell-theorem/>
- 17 A biography of Alain Aspect, a physicist who provided an experimental confirmation of Bell’s Theorem: [http://en.wikipedia.org/wiki/Alain\\_Aspect](http://en.wikipedia.org/wiki/Alain_Aspect)
- 18 Surprisingly funny montage of a man with Tourette’s Syndrome: [www.youtube.com/watch?v=rqtr\\_RvR3sY](http://www.youtube.com/watch?v=rqtr_RvR3sY)
- 19 Video of a grand mal epileptic seizure: [www.youtube.com/watch?v=MRZY2a2jnuw](http://www.youtube.com/watch?v=MRZY2a2jnuw)
- 20 Harry Frankfurt’s article “Alternate Possibilities and Moral Responsibility”: <http://hamishpat.com/Courses/99631/631-article-frankfurt-alternate-possibilities.pdf>
- 21 Book 8 of Aristotle’s *Physics*, where he discusses motion, causes, and agent causation: <http://classics.mit.edu/Aristotle/physics.8.viii.html>
- 22 The life and works of George Berkeley, Bishop of Cloyne, one of the great philosophers of the early modern period: <http://plato.stanford.edu/entries/berkeley/>
- 23 A discussion of the thought of Thomas Reid, one of the seminal figures in the Scottish Enlightenment: <http://plato.stanford.edu/entries/reid/>
- 24 The life and works of the greatest epistemologist of the twentieth century, Roderick Chisholm: <http://plato.stanford.edu/entries/chisholm/>
- 25 The Internet Movie Database entry on *How the Grinch Stole Christmas*, along with some clips: [www.imdb.com/title/tt0060345/](http://www.imdb.com/title/tt0060345/)



- 26 *Twilight of the Idols*, “Four Great Errors,” §7. The full text of Friedrich Nietzsche’s book *Twilight of the Idols, or, How to Philosophize with a Hammer*: [www.lexido.com/EBOOK\\_TEXTS/TWILIGHT\\_OF\\_THE\\_IDOLS\\_.aspx?S=7](http://www.lexido.com/EBOOK_TEXTS/TWILIGHT_OF_THE_IDOLS_.aspx?S=7)
- 27 A video study of a patient suffering from left side neglect: [www.youtube.com/watch?v=ymKvS0XsM4w](http://www.youtube.com/watch?v=ymKvS0XsM4w)
- 28 A discussion of Benjamin Libet, a pioneer on the neuroscience of free will: [http://en.wikipedia.org/wiki/Benjamin\\_Libet](http://en.wikipedia.org/wiki/Benjamin_Libet)
- 29 Video of Libet’s free will experiments: [www.youtube.com/watch?v=IQ4nwTTmcgs](http://www.youtube.com/watch?v=IQ4nwTTmcgs)
- 30 A discussion of psychologist Daniel Wegner, who argues that free will is a cognitive illusion: [http://en.wikipedia.org/wiki/Daniel\\_Wegner](http://en.wikipedia.org/wiki/Daniel_Wegner)
- 31 An explanation of phantom limbs, and how some neuroscientists address the problem of phantom limb pain: [www.youramazingbrain.org/brainchanges/phantomlimbs.htm](http://www.youramazingbrain.org/brainchanges/phantomlimbs.htm)