

## **Goodbye to the Ghost of the Ghost in the Machine**

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### **No Loopholes**

Legend has it that the notorious reprobate W. C. Fields lay on his deathbed, paging through a Bible. Surprised, friends ask him what he is doing: “Looking for loopholes, looking for loopholes,” he mutters.

It seems to me that just as W. C. Fields sought loopholes in the written word of God, many of us today seek loopholes in God’s other book, the “book of nature.” As the accelerating advance of natural science into the once sacrosanct domain of the human renders traditional ideas about our place in the world increasingly implausible, many of us look for ways to safeguard cherished ideas of human nature. The hope is to secure a place for human uniqueness, dignity, moral value, freedom, responsibility, and meaning as traditionally conceived by evading the naturalistic world picture on offer from contemporary science. This project is, I believe, misguided and its hope forlorn.

### **The Ghost in the Machine**

Nowhere is this wrongheaded project more active than in current thought about the human mind. Modern philosophical thought about the mind originates with Gilbert Ryle, in his 1949 book, *The Concept of Mind*. There Ryle famously

derided Cartesian dualism, the idea that over and above the neural machinery of the brain, there is an immaterial mind, as belief in the “ghost in the machine,” an invisible, secret self lurking within or beyond the brain and pulling its strings. The particular species of behaviorism Ryle espoused in this book did not survive long, but the conviction that the non-physical mind or soul lies beyond the pale of serious discussion has only strengthened since Ryle’s day. The science of the mind, broadly conceived as *mechanistic* and *reductionistic*, has carried the day: there’s no ghost, just the machine.

The Cartesian ghost has, by and large, been banished from respectable society. Yet its shadow remains, what I think of as *the ghost of the ghost in the machine*. It is with difficulty that we face up to the—for some of us—appalling fact that there simply is no more to the likes of us than these vulnerable bodies, that all our thoughts, sensations, hopes, fears, aspirations, loves and hates, doubts and certitudes are events in the neural circuitry packed into our heads. Evolutionary psychology offers plausible explanations of the persistence of dualistic thinking in the general population: natural selection has hard wired the brain to find immaterial minds intuitively plausible. But a kind of residual dualism pervades much current theoretical discussion of the mind, particularly, though not solely, among those of us concerned with the dialogue between science and religion.

### **The Re-emergence of Emergence**

A widespread manifestation of this is the re-emergence of an idea popular in the first part of the last century: the mind is *emergent*. A variety of doctrines have

the label “emergence” attached to them. Some are innocuous but uninteresting. Others are exciting but almost certainly false. Virtually any physicalist believes in emergence in *this* sense: when you assemble things that are not minds in certain ways you wind up with a mind. That’s the only alternative to dualism or panpsychism. This is what some people call *reduction*, but others seek a species of emergence that stops scientific reductionism in its tracks. The trick is to come up with something for emergence to be that is simultaneously plausible and, in virtue of being different than *that*, interesting, so that if we found out that the human mind is emergent in *this* sense, we’d have found out something in virtue of which it is metaphysically unique, or at least special, something that might safeguard the human self-image from the rising waters of scientific explanation.

My preferred test comes from the philosopher Jerry Fodor: “Suppose God took it into his head to make another world just like ours.” What would he have to do?

One answer is that he’d just have to

put the quarks and the protons in their places, along with whatever else it is that basic physics talks about, and you don’t also have to worry about placing the planets, or the Pacific, or me, or my anxieties. Physics determines chemistry; chemistry determines biology; biology determines brain science; and brain science determines my neuroses, my fondness for Wagner and the rest of my mental life. Yours too. All the facts that there are, including all the facts that there are about minds, ‘supervene on’ the facts of basic physics.

If this physicalist story is right, then the mind of Jerry Fodor, or of anyone else, is not *emergent* in any metaphysically exciting sense.

On the other hand, if you have to do *more* than this, if putting all the physical things governed by the laws of physics in their places is *not* enough to ensure a duplicate of this world, complete with persons with minds just like ours, then emergence is true. A *microphysical* duplicate of our world would not necessarily be a *psychological* duplicate of it. A metaphysically possible world could contain brains just like ours yet have no minds like ours, or no minds at all. There could be a zombie world. A philosophical zombie, in contrast to the normal kind, is in its brain and behavior indistinguishable from a human being who has a mind. He acts and talks as though he does; he might even author philosophical essays on the impossibility of zombies, but he is really unconscious, mindless. To make a mind, something extra has to be added “on top” of the physical (or the chemical, or the neural) substrate. There’s nothing about this arrangement of this kind of physical stuff that *necessitates* rational consciousness. In our world God has decreed that mind emerges from matter, but things are different in other possible worlds, with different laws, where the zombies live. We have to suppose that, in our world, God has decreed, as a basic law of nature, that mind appears when the right sort of physical materials are arranged in the right sort of way. It’s not, as we physicalists say, that you *have* to get mind whenever you make a working brain because they are the *same thing*.

Some philosophers, all too ready to pit the reliability of their “modal intuitions” about such matters against the reliability of the empirical sciences, are confident that since they can conceive of zombies, zombies are a genuine possibility, and so conclude that the mind is not the same thing as the brain, but emerges from it. I think we should be much

less sanguine about the likelihood of deriving correct conclusions about what's possible, and ultimately about what's real, from what we find it possible to conceive.

If emergence in a robust sense were true, we'd have the moral equivalent of dualism. We'd be entitled to say the mind is more than the brain without having to believe the mind is an immaterial entity. We'd have the comforts of dualism without the substance. We'd have the ghost of the Cartesian ghost in the machine.

Yet I find emergence in this sense *exquisitely* implausible. Among other things, it requires us to accept that there are fundamental laws of nature about large, complex things. But all our experience suggests that nature's fundamental laws are about very small, simple things. Large complex things—brains, cats, planets, galaxies—go along for the ride, their doings the result of the basic laws governing their microscopic components.

### **The World is Flat**

Why would anyone find emergence plausible? Part of an explanation seems to lie in popular but misleading ideas about "levels of reality." Some think an emergent, mental level of reality must be added to the physical world before there can be minds. After God makes all the protons and quarks and so forth, he has to glom another level on top. Are there "levels of reality?" No, metaphysically speaking, the world is *flat*. Literally, when there are levels of something, there are numerically distinct things (or parts of things), e.g. rock strata, layers of a

cake, floors of a building. But as metaphor carried beyond its spatial home it is prone to a crucial equivocation. Someone might add a new floor to an existing building, or reorganize the components of a floor, causing it to have properties it did not have before, but it would be amazing if reorganizing a floor's components caused a new-numerically distinct-floor to appear, so that where there was a nine story building now there is a ten story building.

**What** would not be amazing is if reorganizing the items on a floor caused there to be something we want to regard as a new floor, in a qualitative sense, especially if we get a floor with properties never seen before, or that justify categorizing it differently than floors lacking those properties. Saying there are now *more* levels because we have a *new* level is mere equivocation.

**Talk** of levels of reality blurs the distinction between thought (or language) and reality. We cannot read the structure of reality off the structure of our language—no more than we can read it off what we can imagine or conceive. Belief that reality has levels, like belief in the possibility of zombies, results from overconfidence in our capacity to know the world *a priori*. There are multiple levels of description of the one reality. Complex things can be observed and described at a variety of scales, but to change the scale is not to look at a different thing. It's to look at the same thing in a different way. The human brain, being extravagantly complex, can be described at a variety of scales, from that of its constituent elementary particles to its atoms, biochemicals, neurons, cortical columns, neural circuits and so on, up to its gross anatomy. And of course to

description of what it's up to in our familiar folk-psychological vocabulary of belief, desire, intention, and so on. There are levels of description, explanation, organization, things made of parts that are made of parts that are made of parts, and so on. Things described with more or less attention to fine detail; things described more or less schematically, at higher or lower levels of abstraction. But no levels of *being*. It's all flat.

A vat of elementary particles is just glop, but put those very same bits and pieces together the way some of them have been put together by means of millennia of natural selection, and you have something that thinks and feels. We have a thing of a qualitatively new kind, a mind, something we can make sense of only with new concepts, a new vocabulary, but characterizing this as a new level of reality is to be haunted by the ghost of the ghost in the machine, the notion that there really *must* be something there, over and above the intricately arranged physical things. But a human mind is *nothing but* those particles, suitably arranged.

### **Down With Downward Causation!**

The idea that we inhabit a multi-level world does real mischief when it enables talk of *top-down* (or *downward*) *causation*, where a higher level of reality allegedly acts upon some lower level. E.g., the mind produces effects in the brain. This is the ghost of the ghost with a vengeance, a subliminal dualism inviting us to picture the mind as some sort of immaterial reality, hovering one

layer up from the brain. I find it difficult not to suspect that anyone who says such things, even if she officially denies allegiance to mind/body dualism, is *imagining* something beyond the physical world acting upon the quarks and electrons that comprise the brain.

Some seize on downward causation, seeing in it a loophole for choice that is free in virtue of having no physical cause. For instance, Ralph's beliefs emerge from what's happening in his brain, so maybe Ralph's belief that philosophers are to science as pigeons are to statues emerges from a particular pattern of synaptic activation levels across a large population of neurons which forms a massively parallel, distributed processing system in Ralph's brain. Suppose his having this belief causes him to behave—his body to move—in certain ways. Thus a case of top-down causation: the mental level acts downwardly upon the physical level. Beliefs push atoms around. But there's no hope for radical free will here. Robust, metaphysically sexy emergence implies that the brain being in such and such a state is a sufficient condition for some mental property to manifest itself, because it *causes* that mental state. The mind, if emergent in a strong sense, is itself fully the effect of physical causation. It cannot make things happen in the physical world in the autonomous way that defenders of contra-causal free will desire. It cannot do the work once attributed to the Cartesian soul. It merely generates the vain hope that it can.

## **The Ghostbusting Conclusion**

The contemporary appeal of emergence is one manifestation of the widespread unease caused by the encroachment of the natural sciences into the human realm. It is of a piece with the attempt to underwrite human freedom or dignity or uniqueness by dwelling on the ways in which any plausible physicalist account of the mind is non-reductive, by invoking quantum mechanics, or chaos theory and non-linear dynamics, complexity theory, self-organization, let alone process thought or even Teilhard de Chardin. Don't get me wrong: some of this is really cool stuff. But I don't think any of it is going to stave off significant revision in our idea of what it is to be a human being. It will not soften the blow to our ancient image of ourselves as the realization settles in that we are material beings, the product of eons of unguided natural selection, totally enmeshed in the causal order of the physical world.

**R**ather than reaching for such exotica in a panicky effort to save what matters to us about ourselves, I suggest a more mundane strategy, one that involves cultivating a couple of simple habits of thought.

First, consider what can happen when we have a long-standing idea of what something is like, but discover that there isn't anything like that, indeed that nothing could really have the characteristics we've always thought this sort of thing has. One response is to conclude:

(1) We've discovered that that sort of thing does not exist

Another response is:

(2) We've discovered that we were wrong about what this sort of thing is like; its real nature is different than we thought.

Sometimes, of course, the reasonable course is to conclude that things we once thought were real really aren't. But I suggest that, when it comes to some of the important things we believe about ourselves, for example that we are unique among creatures, indeed, made in the image of God, that we are rational, free, morally responsible agents, capable of framing meaningful thoughts about things, and gifted with the hope of a life beyond this one, we should cultivate the habit of mind of at least taking (2) very seriously before opting for (1). We should, for instance, consider that the mind, or consciousness, or responsibility, or meaning is rather different than we thought before quickly concluding there is no such thing. For instance, take the idea, dear to many of us, that human beings are made in God's image. A traditional way of understanding this, still popular with many, is that we are made in the image of God in virtue of being immaterial beings. Along comes 20<sup>th</sup>-century science, and we discover that humans are not immaterial beings. I suggest that we resist the impulse to conclude that we are not made in God's image, and that instead we conclude that being made in God's image involves something else, and start to see ourselves as the material image of God. We expect scientific inquiry to challenge our idea of what we are like, but that challenge can surprise us without debunking what most matters to us about ourselves.

Second, I think we should pay greater heed to the role debatable philosophical assumptions play in our reception of what contemporary science has to say about the human condition. Suppose I encounter a conflict between:

(a) What science says

(b) My philosophical beliefs

(c) My commonsense self-conception

That is, (a), (b), and (c) constitute an inconsistent triad. All three can't be true. Something has to go. For example, someone believes:

(a) All human choices are caused

(b) No choice can be both free and caused

(c) I am free.

What I find puzzling is how many of us are ready to jettison (c) rather than (b). Maybe, being a philosopher, I have less confidence in philosophical theories like (b) than other people, but it seems obvious to me that our belief that most of us most of the time act freely is more secure than anyone's philosophical intuition that freedom is incompatible with causation. Neuroscience and cognate disciplines may well call for significant revisions in our idea of what it is to be free and morally responsible, yet it's not science alone, but science together with a philosophical theory, that implies that freedom and responsibility are illusory. Lose the philosophical theory, and the results of scientific inquiry may well lose some of their sting. We may rightly treat our convictions about human dignity as more secure than our philosophical ideas about ways it is grounded in reality.

Science has unequivocally located mind in the physical world. Whether we can assimilate its challenges to our image of ourselves and still find in the world science portrays a place for what we most value about human beings is, I believe, a question it is too soon to answer. What seems clear is that a quest for loopholes in the materialist world picture is not a likely route to a happy outcome. Instead,

our best bet lies in careful attention to what the results of science really do—and do not—imply.