

**PASTORAL COUNSEL FOR THE ANXIOUS NATURALIST:
DANIEL DENNETT'S *FREEDOM EVOLVES***

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Abstract: Daniel Dennett's *Freedom Evolves* is a rhetorically powerful but philosophically unconvincing attempt to show that a deterministic and ontologically reductionist, but epistemologically pluralist, outlook may peacefully coexist with a robust acceptance of human freedom and moral responsibility. The key to understanding the harmony rests in recognizing that freedom is not a metaphysical or physical condition but is instead a product of deeply embedded social practices. I argue that Dennett's project rests on an unargued and implausible deflationary stance toward basic metaphysics.

Keywords: avoidability, causation, compatibilism, determinism, emergence, explanation, free will, Humeanism, naturalism, reductionism.

The churchgoing philosopher who settles in for an extended reading of Dan Dennett's new book (Dennett 2003) will find himself in a familiar circumstance. What one confronts is a lot more like an extended sermon than it is a typical philosophical treatise. And, whatever one's Sunday morning habits, one can't help but admire the preaching skills artfully displayed. The delivery is powerful and assured; the argument is streamlined, peppered with evocative and delightful illustrations that will be recalled long after the particular points have faded from memory; dangerous errors are clearly identified, and while we are urged to pity rather than to hate their purveyors, we are also repeatedly warned about the fateful consequences of their mistakes; tropes are repeated to growing effect; finally, the tone is one of earnest exhortation, relieved intermittently with some well-chosen humor, while it lays the necessary foundations for several closing points of practical application.

As I say, judging by purely rhetorical standards, it's a bang-up job. Here's my problem: though I've been asked to respond to the content of Dan's powerful sermon, he's not really preaching to *me*. Like every faithful pastor, Dan keeps uppermost the needs of the congregation to which he has been called, and frankly, I'm of a different religion altogether. Oh, Dan is the welcoming sort of pastor, and I'm sure he would be gladdened if, while sitting uncomfortably in a back pew,

listening quietly, I found my heart strangely warmed. But I'd be mistaking the context if I expected a patient airing of a wide array of going views contemplated outside the church walls, or even a thorough argument *against* my particular way of thinking on the matters at hand.

Deepening my problem is that I'm to respond to a readership of professional philosophers. Chances are, as I'll explain in a moment, you're not a member of Dan's church, either. For some of you, the differences are merely denominational, having more to do with polity and communication style than with basic tenets of the faith. Still, such differences famously lead to mutual annoyance. As generally likeminded to Dan as you may be in doctrine, his way of making the case differs in a way that may prove disconcerting.

So, mindful of this challenge of mixed readerships, and resolved not to settle for playing the part of the village atheist presumably envisioned by Alva Noe in organizing this symposium, I've had to think a bit about how to approach my present remarks. Here's what I've decided to do. I'll begin by describing the main orthodox tenets within Dan's church concerning both method and doctrine. I'll then consider the doubts to which some of its members are prone. These doubts are not so much about the fundamentals of the faith—the doubters are not tempted by “atheism”—as about the particulars of Dan's rather stringent denomination. Some of the doubters are privately wondering whether they should leave Dan's church for the more liberal and urbane high church in town. Others tend to agree with Dan that such a move would be a big step on the road to perdition; instead, they are worried that Dan's church shrinks from embracing the full consequences of what it already (supposedly) believes. In its concern to soften the hard theological edges, they think, the church shows a dangerous disregard for speaking truth plainly. (The temptation of these folks is to let mainstream popularity be hanged and to run off and join a splinter sect that unashamedly draws the darker consequences, refusing to sugarcoat uncomfortable facts about the human condition.) Dan's central aim, as best I can tell, is to address precisely these two groups of doubters, persuading them to see the wisdom in his *via media*. I will adopt the perspective of the two groups of doubting Thomases in Dan's parish and try to assess the persuasiveness to their ears of Dan's counsel to hold to the vital center.

1. The Fundamentals of the Faith

So what do the members of Dan's congregation look like, and what's their common vision? My impression is that they draw more heavily from the biological and cognitive sciences than from the pool of professional philosophers, with many of the philosopher adherents being those whose work makes substantial contact with these sciences. In saying this, I do *not* suggest that a majority of such scientists are members of Dan's

congregation. While the philosophical inclinations of scientists properly have no influence on my own philosophical opinions, the same is not true, sadly, for many members of Dan's congregation, who appear to confer priestly status on the most accomplished of these thinkers. Furthermore, Dan and others seek rhetorical advantage in claiming that a majority of scientists hold the beliefs I am about to describe. Now, the distinctive features of Dan's denomination are of a very general metaphysical and epistemological nature. Scientists, and experimentalists in particular, famously tend to be allergic to general metaphysical claims. And once one distinguishes claims about proper methodology in science from claims about permissible belief, one will find scientists all over the map concerning Dan's austere epistemology. So it seems to me, from reading and conversation, and I challenge Dan to prove otherwise.

I pass with relief from armchair sociology to philosophy. The overarching feature of Dan's religion is a certain kind of fundamentalist naturalism. Now Dan tends to get a bit hot under the collar when his folks are tagged with the "fundamentalist" label (2003, 19–20). I think it's reasonably apt here, but I want to make clear what I mean by it. Consider first a generic or minimalist naturalism that is characterized by a central metaphysical claim, with an attendant constraint on the sources of human knowledge. The metaphysical thesis is that reality is a self-contained, closed, and unified natural system. Its unity entails just this: the only ontological simples there are (if any) are microscopic physical particulars or fields. All the features and powers of complex systems of simples (1) arise over time from gradual processes involving hierarchical aggregation of smaller structures, (2) continuously depend in each instance upon the processes of their parts, and (3) are powers that interact with their physical environment alone. Human beings are thus complex physical systems, and their cognitive processes entirely supervene on the conjunction of processes internal to the system and the causal interactions of these with their physical environment. The epistemological constraint this yields is that human knowing must be wholly immanent to the vast network of causal interactions comprising the natural world. And this of course poses a challenge for understanding knowledge of mathematics and other forms of apparently a priori knowledge, including large swathes of philosophy, traditionally conceived.

What makes a naturalist a fundamentalist? Naturalists are an educated bunch (as fundamentalists often enough are), but their intellectual diet is narrow. Dan says early on that, as he conceives naturalism, it is

the idea that philosophical investigations are not superior to, or prior to, investigations in the natural sciences, but in partnership with those truth-seeking enterprises, and that the proper job for philosophers here is to clarify and unify the often warring perspectives into a single vision of the universe.
(15)

I think Dan intends something very strong when he denies any priority to philosophy. *Nothing* about what we do has a conceptual or explanatory priority to mature empirical theorizing. *All* that we bring to the table is a certain skill at clarification and synthesis—the substantive content comes from the sciences, and the sciences alone. The credo goes something like this: “By empirical inquiry, through the evolutionary gift of Mother Nature, *alone*.” In thinking about human beings and our place within the wider scheme of nature, we are never entitled to make empirically “risky” assumptions in advance of hard evidence that has the imprimatur of a mature science—however well certain assumptions may fit our prereflective view. I think this general fundamentalist constraint does a lot of work, as I’ll indicate shortly. It generates a specific application from evolutionary biology in the following way: our thinking about any significant human attribute should be explicitly constrained by our ability to formulate reasonable conjectures about how that attribute could have arisen through a gradual adaptationist process involving simpler ancestral attributes. Now this specific constraint seems to play an important role in Dan’s way of thinking, providing a main bulwark against any temptation to liberal naturalist ideas concerning freedom of will and moral motivation in particular (217). I confess that I’m not really sure, however, just how this goes—Dan’s discussion gets a bit cloudy, it seems to me, perhaps reflecting the vagueness of the present state of socio-biological theorizing. (I’ll simply invite Dan to expand on this theme, assuming I’m right about its importance in his eyes.)

A final, metaphysical plank in the fundamentalist naturalist’s program is a commitment to an austere reductionist brand of materialism. (I don’t say that every fundamentalist, or even Dan himself, would choose the dreaded “R” word to characterize their view. I do say that given a perfectly sensible construal of that word, it in fact characterizes their view.) Now, I don’t think we can formulate at all clearly reductionist theses or their denials apart from an (a prioristic!) ontology of properties and individuals. And I’ll be complaining in a bit about Dan’s uncritical reliance on some contentious metaphysics—which reliance matters a great deal to some of what he wants to say. But even apart from Dan’s private metaphysical opinions, a cloudy vapor of reductionism is there in the picture of the world as entirely *constituted* and its patterns *fixed* by a vast aggregation of microphysical processes. This picture is vividly represented (in a simplified fashion) by John Conway’s Game of Life, which Dan enthusiastically invokes. It describes a two-dimensional grid reality on which properties of individual grid cells at a time atom t are strictly determined in a very simple way by the basic properties of cells in the local environment at time $t - 1$. Over time, aggregates of cells will form enduring clusters that exhibit interesting large-scale patterns of behavior that can be understood in macroscopic terms—yet always in a manner consistent with the law of the basic physics.

2. Dennettian Freedom Compatible with Dennettian Determinism

Such is the fundamentalist naturalist's basic vision, as best I can tell: metaphysical reductionism conjoined with a scientific epistemology. Dan's basic burden is to say that you can have all that and freedom and responsibility, too. (Elsewhere, as you are no doubt aware, he wants to assure us that you can have all that and consciousness and intentionality, too.) The common core of each of his reconciliationist strategies is to urge that giving a detailed naturalistic account of the "threatened" feature of persons is not to deny that it is real and efficacious. Conway's Game of Life is here a useful corrective. Even though the development of, and patterns among, multicelled structures is fixed by the atomic physics, they are real and make a difference to what happens on a macroscopic scale. When the Life board develops to a point where fairly stable, interesting macroscopic structures appear and interact in ways that can be described (for the most part) in purely macroscopic terms (gliders, eaters, and so on), invoking macroscopic "laws," its ontology has just increased. There have come to be gliders and eaters and (hedged) laws governing their interactions (40). And, switching to the much more complicated real world, where there are composite systems whose behavior can be usefully (and possibly only) understood by invoking the concepts of belief, desire, intention, and so forth, there are—really are—believing and desiring agents. And where the behavior of some of these agents can be understood, as a practical matter, only in terms of their having capacities to pursue some courses of action and to avoid others through reasons-guided decision making; their ability to adapt their behavior to new information; their being aware of and sensitive to moral norms—and *where they regard themselves as free and responsible agents*—there you have free and responsible agents.

Dan nicely expresses this instrumentalist aspect of his view thus:

The idea that we have free will is another background condition for our whole way of thinking about our lives. We count on it; we count on people "having free will" the same way we count on them falling when pushed off cliffs and needing food and water to live, but it is neither a metaphysical condition nor a fundamental physical condition. . . . The atmosphere of free will is . . . the enveloping, enabling, life-shaping, conceptual atmosphere of intentional action, planning and hoping and promising—and blaming, resenting, punishing, and honoring. We all grow up in this conceptual atmosphere, and we learn to conduct our lives in the terms it provides. (10)

Dan's philosophical assumption that our freedom concepts are not metaphysical does heavy lifting in his breezily compatibilist outlook. The rest of the work is done by the equally deflationary perspectives on causation and the ontology of properties.

First consider the terms *(in)evitable* and *(un)avoidable*. Dan notes that we use these terms to describe not only our own actions and circum-

stances but also those of simpler life forms and sophisticated machines. In a wide variety of these contexts, when we ask whether system *A* has the ability to do *X* instead of *Y* or *Y* is instead inevitable, we are not asking whether *X* was consistent with the world's law-governed evolution up to the time in question (whether it was causally determined). Instead, we are asking the counterfactual question of whether *A* achieves *X* in any of an imagined class of worlds similar to our own—where the similarity is determined not by an identical past world history but by rough macroscopic similarity consistent with our always incomplete knowledge of how things were and guided by our interest in how things “work” at macroscopic levels of description (79–83). In this sense, a fish could have avoided being eaten (the relevant maneuver was well within its repertoire, though it unhappily opted for a less successful alternative on that occasion), and the chess-playing program could have performed the better castling move:

If we want to make sense of the biological world, we need a concept of avoidance that applies liberally to events in the history of life on Earth, whether or not that history is determined. (60)

Fair enough, but then he continues: “This, I submit, is the *proper* concept of avoidance, as real as avoidance could ever be.” To which many of us retort: why think that the very same notions of avoidance/avoidability are at work when we assess impersonal systems, even sophisticated, information-processing ones, and human beings to whom we attribute freedom and responsibility? It seems rather that we have at least two important senses—the general “can” of ability (whose satisfaction conditions vary somewhat by context) and J. L. Austin’s “all-in” sense of “can,” which seems to require causal indeterminism.

Concerning the latter sense, Dan invites us to revisit Austin’s famous missed putt. Austin is sure he could have holed it and muses about what the operative sense of “can” is in this ostensible truth. Dan says that despite Austin’s own conclusion, Austin in fact has in mind only the “can” of fairly reliable ability. This is shown by Austin’s claim that “further experiments may confirm my belief that I could have done it that time, although I did not” (76). Dan argues that if these “experiments” are further attempts to make the “same” putt, then this can show nothing about Austin’s ability in conditions as they exactly were, only suitably similar conditions. Here I think Dan fails to appreciate that the all-in sense of can is not disjoint from the ability sense but is rather stronger than it. It is the ability sense *plus*. (The mere causal possibility of Austin’s having made the original putt is not sufficient for his having been able to make it, as we ordinarily mean.) No experiments that we are able to undertake could confirm the further condition of (robust) causal indeterminism—we simply assume that in practical life. But we can confirm the presence or absence of a reliable general ability. Austin and his fellow

incompatibilists never buy into Dan's basic assumption that the sense of can that is crucial in moral responsibility contexts is a sense that is readily verifiable (in a strong sense of verify, to those who would doubt certain framework assumptions of moral practice).

Let me round out Dan's deflationary metaphysical picture. It is basically Humean—the whole is made up of lots of matters of local fact, related only by external relations, such as time and space—although I shouldn't be surprised if Dan's distaste for traditional metaphysics might lead him to quibble with any such label. But he clearly denies that there is an objective, irreducible relation of causation out there in the world between states of affairs. There are, though, many patterns of regularity running through that portion of Nature that we have observed, at varying levels of aggregation and complexity. What "counts" as a cause of what depends on which states of affairs at which levels of description will lay bare the most explanatory pattern. (Cause and causal explanation are thus run together, so Dennett's understanding of causation is more pervasively pragmatic than David Lewis's similarly Humean-ontology-based program of analysis.) There is, then, no threat of a competing causal story on my action from fundamental physics. Physics isn't even a viable candidate science for human action, as its fine-grained concepts are useless for capturing coarse-grained patterns. Each of the microscopic events that jointly constitute my writing for you are caused by myriad other microscopic events, yet the action itself has no micro-physical causes.

This last claim is astounding to me and, I suspect, to those squirming as they take in Dan's sermon. Why? Perhaps it's because, like me, they are committed to causal realism. Some things make other things happen, and the truth makers of these causings do not consist in suitable regularities in patterns between isolated bits of inert fact. Physics does not merely describe the most general and fine-grained regularities in the world, it points to an ontology of dispositions that explains those regularities and is the fount of every other level of regularity to be found in the world. The capacities of complex systems are, it seems, but structures of the dispositions of their ultimate constituents—at least in the usual case.

Dan is of course correct that you'll not get a good *explanation* of a macroscopic phenomenon, such as a computer program's chess playing, from microphysics. For that, you'll have to invoke concepts that not only fail to apply to microphysical entities but also fail to map neatly onto complex structures of microphysical entities. But that is not a good reason to posit many layers of *distinct* causings. When we get serious about causation, the relationship of causation and causal explanation will not be as simple as Dan has it. Important explanatory concepts will not stand in a one-one relationship with the structures that do the causal work. Theoretical irreducibility is a highly interesting fact about our world (and one necessary for science to get off the ground,

as in practice we inevitably work our way in, not out), but it cuts no ontological ice.

This basic way of looking at things raises important questions concerning the special sciences (as Jaegwon Kim has emphasized in a variety of writings), but we can't get sidetracked into a full exploration of this matter here. I merely want to suggest that Dan's doubting Thomases are probably not buying his deflationary metaphysical vision. And if they don't, the tension remains acute in the case of free will. Here the problem is on a "vertical" level, stemming from reductionist implications for personal causality, alongside the familiar "horizontal" implication of determinism (strict, or near enough as makes no difference) for the openness of the future. It is not enough that macroscopic patterns running through us are illuminatingly characterized and *explainable* in action-theoretic terms. For a person to be responsible for what he or she does, his or her causal *activity* must not entirely consist in the activity of impersonal constituents. But to causal realists who are members of Dan's church, at least, it does (seem) so to consist. And their basic causal realism is not some arbitrary philosophical predilection. Hume at least had the good sense to recognize that his (apparent) view of causation was a skeptical one, thoroughly at odds with our pretheoretical understanding.

Moreover, Humeanism, too, can be interpreted in ways less sanguine to acceptance of free will and responsibility than Dan's incurably optimistic one. If, truth be told, there is no mind-independent "power" in objects *producing* the outcomes of their interactions, this extends to ourselves and our actions. If each of my choices and actions is in reality "loose and separate" from the circumstances of character and motivation from which they appear to issue, then what I do is a baldly contingent fact, ungrounded in such surrounding facts. It is metaphysically prior to and partly determinative of whatever patterns, including psychological patterns, that may happen in the end to generalize over it. It's hard to see how that is attributable to me as my creation because it's hard, on the Humean picture, to see how anything is properly attributable to anything, in the final analysis. (Modern-day Humean analyses, whether Lewis-style or Dennett-style, are patently surrogates for the real goods. Ordinary thinking about causation and agency is just not as metaphysically innocent as the cheerful Humeans would have it.)

3. Surely You Don't Believe in Ghosts!

Now, at about this point Dan will tell you that to the extent that any of his parishioners are buying into these conclusions, they do so on the basis of contrived fear and loathing brought about by philosophers. Dan forcefully sounds this theme in the preface, where he tells us that he has long noticed

the hidden agenda that tends to distort theorizing in all the social sciences and life sciences. People working in quite different fields with different methodologies and research agendas nevertheless often shared a veiled antipathy, trying to keep their distance from the implications of two ideas: Our minds are just what our brains non-miraculously do, and the talents of our brains had to evolve like every other marvel of nature. Their effort to keep this vision at bay was bogging down their thinking, lending spurious allure to dubious brands of absolutism and encouraging them to see small, bridgeable gaps as yawning chasms. The aim of this book is to expose the misbegotten defensive edifices people have constructed in response to this fear, dismantle them, and replace them with better foundations for the things we hold dear. (xi–xii)

And from time to time in the body of his work, Dan reminds his readers that it is ignoble fear—whether of determinism or of reductionism—that is tempting them over to the dark side, seeking something more than fundamentalist naturalism has to offer.

But if our ordinary thinking about freedom and responsibility really is as metaphysically uncommitted as Dan says, whence the fear, so strong as to distort profoundly the theorizing of educated scientists in numerous fields? As best I can tell, the chief culprits in stoking these irrational fires are the philosophers of “tradition” (216, 306).

I don't know about you, but this strikes me as ridiculous. Philosophers put out all sorts of claims with little discernible effect on the wider public. Yet lots of folks, including lots of Dan's coreligionists, see compatibility problems while betraying no signs of fear or loathing, and without obvious indoctrination by fearful philosophers. Which is more plausible—that philosophers of tradition have taught them to be afraid (and even kept the scientists among them from properly going about their business), or that they find everything-goes, constructive Humeanism simply to be implausible (your having to be a professional philosopher trained in a certain intellectual tradition of its own to think otherwise)? Cheap rhetoric aside, what's at stake here is whether Dan's perspective is more plausibly viewed as descriptive or revisionary—whether it should be taken as an account consonant with the very things we've believed all along, or more as a recommendation for how we ought to come to think about freedom and responsibility, given the alleged facts, however we may have thought about these matters before. The main thrust of Dan's argument leans toward the former, but his mind seems not to be wholly made up here, so that the nature of his counsel is at points obscured.

The pessimistic, schismatic doubters in Dan's fold, in any case, think the latter, revisionary view is the only available option. In their view, straight orthodox doctrine, uncompromised by easygoing metaphysics, implies that morality is really a sham. What Dan offers is at best pseudofreedom. Perhaps we can learn to live with it, but only after we've fully absorbed the painful truth. The optimistic, heresy-contemplating doubters, on the other hand, wonder why we can't have naturalism

and a more robust freedom. Why not look into the gap between minimal and fundamentalist naturalism?

Further to combat all such doubts, Dan tries to persuade them that the envisioned alternative is not even well conceived and in fact offers us nothing at all worth having that we can't have with orthodoxy. It is but "irrational and unmotivated yearning" (136). He softens up the doubters by telling them that what the opposition generally supposes is "a God-like power to exempt oneself from the causal fabric of the physical world" (13), an "immaterial soul that hovers happily in your brain, shooting arrows of decision into your motor cortex" (223). Until lately, all they've come up with is "a zoo of hopeless monsters." Well, I'm a busy guy, and I was ready to throw in the towel right then and there. But for the sake of those in the flock who can't easily shake irrational hankerings, Dan is willing to go the extra mile. So he devotes a chapter to exploring patiently the one metaphysical account of free will that, you see, is not plain nuts—the naturalistic theory recently put forth by Robert Kane. In effect, Dan's message is: Look, if you can't find your elusive ideal here, you're not going to find it anywhere.

In brief, Kane supposes that my choices are always the direct outworkings of salient states of desire, belief, and intention—my agency consists solely in the efficacy of such intentional states—but which choices result are sometimes undetermined. The chief locus of free will lies in those deliberations where I am strongly attracted to a plurality of incompatible alternatives, as with the conflict between short-term self-interest or desire and moral or prudential considerations. It is natural to describe such episodes as ones where I am striving in two different directions. Were I to take *either* of them, it would not be random, capricious, or (wholly) out of character. It would be something I wanted. And if my wanting it plays the right role in nondeterministically causing my deciding to do it, well, that's what it is for the choice to be up to me.

The trick is to develop a coherent picture that includes all these elements. Kane's picture is that we think of the distinct sets of psychological states that prompt us in different directions as comprising a temporarily discordant self-network that must resolve itself in a particular way, one that will reverberate to later choices by altering the weight that such reasons will have in future deliberations. In deciding, I am aligning myself with one set of considerations, *making* them to be the more weighty on this occasion. He posits that this kind of conflict within the self-network somehow triggers (reflects?) a temporary, large-scale indeterminacy, owing to a neural mechanism that amplifies small-scale quantum indeterminacy. Through the process of deliberation, the relative weightings of our conative states evolve indeterministically, achieving quasi-deterministic equilibrium in the choice itself.

Dan's most fundamental criticism of this picture is that it is "practically impossible to discover. There is no way to tell" a decision that has

the genuinely indeterministic features from a counterfeit that relies on pseudorandom processes that appear random [indeterministic] to the agent. "They would feel the same from the inside and look the same from the outside" (127). Why should such a subtle metaphysical feature count for more than those accessible to both "the everyday biographer and [the] fully equipped cognitive neuroscientist" (129)? Why is it a variety of free will worth wanting?

Insofar as this is just a way of running the old "Who cares about metaphysics?" line, I've already made clear my own sympathies. But that obscures a better criticism of Kane's picture that is actually made quite deftly earlier in the chapter. Dan asks precisely where we want to locate the indeterminism. Each idea is probed for its rationale. Some are unhelpful, resulting in "mere noise" not integral to the process but potentially undermining of it. The rest, closer to Kane's actual intent, are unmotivated from an "engineering" stance, in that while the posited indeterminacy may confer genuine alternatives, it confers no further practical power. Therefore, it's hard to see why its presence should be critical to the presence or absence of true responsibility.

In my view, however, the most important step in Dan's critique was made in the beginning, in the implicit message that an account like Kane's is all that the naturalist could sensibly seek. It ensured that the avenue explored will not in the end significantly differ from orthodoxy, despite the initial fanfare of introducing an empirically risky posit of indeterminism in the deliberative process. And if there is no substantial metaphysical payoff, even for those who hanker after such things, Dan's plea—"Won't you please come home?"—seems quite reasonable.

But is there really no alternative to the naturalist who's willing to ride high and free on the back of a little bit wild, certainly unproven, and so potentially refutable assumption, so long as the basic tenets of naturalism are maintained? Especially if all we're after is an account of what we *want*, whether we have it or not? (Remember, we're here rejecting Dan's pragmatic framework assumption that whatever free will is, it's something we have. Our doubters think that's an open question, which is why they're not going to be steered away from accounts that may not sit easily with strands of contemporary theorizing.) It seems to me there is such an alternative, though I'll not be able to do more now than gesture in a certain direction.

First, the wedge the liberal naturalist needs is the idea that certain human capacities are ontologically emergent. Don't think (merely) unpredictable from certain vantage points here, or underivable from a lower-level theory in terms of its own vocabulary, or any other idea that is at bottom epistemological. Instead, think new *basic* capacities resulting from irreducible properties of whole systems—properties that are caused and sustained by the properties of a system's fundamental parts, via dispositions for such effects that are latent outside contexts involving the

right sort of empirical complexity.¹ Dan alludes to that idea just once, when he notes that in Life worlds there is “no whiff of strange new complexity-forces” (50). Exactly, says our liberal naturalist, that’s just what’s wrong with using building-block Life worlds as models, even highly simplified models, for how to think about the micro-macro relationship in our world. That’s *one* way of respecting the basic naturalist constraint, but it’s not required. The causal unity of nature does not require that everything reduces without remainder to fundamental physical dynamical arrays of varying amplitude. Even Kane’s minimalist version of libertarian free will looks better when set loose from this constriction, as it would allow for first-order mental causation of, or causal contribution to, the choices I make.

Less conservative parishioners will go further. Conceiving mental states and capacities as having ontologically emergent aspects is the first step, one that provides a “platform” on which a distinctive capacity of choice can rest. It is not a mere gap, a robustly indeterministic juncture in the transition from deliberation to choice. It is an active power, a distinctively purposive form of causality. It is a power to control *which* of the possibilities (partitioned into coarse-grained, action-theoretic terms) left open by the enormous aggregation of structuring factors will obtain on a given occasion.

Dan says that embracing this assumption is to believe in *magic*. (An odd charge, coming from the lips of a Humean, but let that pass.) In Dan’s eyes, it is to abandon the naturalist religion altogether. “How do ‘we’ cause these things to happen?” (100), he asks incredulously. As with many rhetorical questions, this one obscures the issue. Taken straightforwardly, the answer is, we just do. You might as well ask the same question about electron repulsion, once the relevant properties and their magnitudes are fully described. In both cases (we’ll assume), the capacities involved are ontologically basic, so there is no “how” in the sense of underlying mechanism or structure. However, we can sensibly ask about and look for sustaining forces that shape and enable such capacities. And in the case of ontologically emergent basic capacities, as freedom of will is here supposed to be, you can ask how there comes to be such a capacity in the first place. What configuration (here neurophysiological) is a minimally sufficient condition for the appearance of such a marvelous basic capacity? Further, you can sensibly wonder at the extent of its impact on the ordinary dynamics (in subemergent contexts) of the fundamental constituents of the system. Dan doesn’t seem to like it when a philosopher shrugs his shoulders and says: “Those are all fascinating questions for empirical researchers. It would be great if neuroscience can attain a degree of understanding of the detailed dynamics of normally functioning

¹ On the distinction between epistemological and metaphysical concepts of emergence, see O’Connor and Wong 2002.

human brains adequate to formulate empirical hypotheses.” But that seems the right thing for the philosopher to say, nonetheless.

4. Future Excavations

Dan has fascinating things to say about the pessimistic conclusions drawn from the time-of-willing neuroscientific experiments of Benjamin Libet and from a variety of studies in cognitive psychology amassed by Daniel Wegner. Here and there, I thought the liberal naturalist could even offer a hearty “Yea and Amen.” But given space constraints, I’ll let these matters pass and merely congratulate Dan for his thoroughly artful and provocative treatise on human freedom.

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