Underlying all the foregoing points—undergirding the conditions on genuine general intelligence—is something even more primordial. It has to do with that which I am calling the world.

In a way, the point is simple. Everything we believe, everything we take in, everything we represent and are committed to, must be something we can understand as being in a single world—the world that both we and it inhabit. Even if a phenomenon makes sense “on its own” (whatever that might mean), it cannot exist, cannot have the requisite actuality and otherness and so forth, unless it is part of the world—part of all that there is, that which is total, the “One.” (See the sidebar on the next page.)

This generates a four-fold condition on our taking an object—or anything else—to be real:

Four-fold Commitment

1. We must hold the object accountable to being part of the world;
2. Reciprocally, we must hold the world accountable to hosting the object;
3. We must also hold ourselves, and our relationship to the object, accountable to being in that self-same world; and
4. Reciprocally, we must hold the world accountable to hosting us, and that relationship, as well.
If something appears to us that is unaccountable, something is profoundly wrong. We have to demur. We cannot go there. We must fight like hell to get out of that place, or we will die.

A few explanatory comments. First, honoring this standard does not require being aware of the four commitments, especially in any explicit sense. In the first instance, in fact, an explicit belief to the effect (especially a propositional representation of them) would not help. The four-fold commitment is prior; it must grip us as a governing norm, in order for any beliefs or states of awareness to be about their subject matters. Second, the “we” in the formulation does not refer to us as individuals, even if it ultimately places responsibility on individuals’ shoulders. These are conditions that societies and cultures have hewn, over many centuries, into which we are indoctrinated as

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**Pluralism**

Some will say that different people live in different worlds. I am sympathetic to pluralist ontologies (registration schemes, I would say, which configure ontologies). But there must be a “lower level” or, in some other sense, a more ultimate metaphysical unity holding everything together. If X shoots Y “in X’s world,” Y (that is, that which we or X register as Y) will likely die no matter what “world” they inhabit. If that which I register as a black hole destroys my world, it will likely destroy yours as well. If I want to reach out to you, not only would I be unable to reach you, if you genuinely lived in a different world; I would not even know of your existence. And so on. This is why reference (like a bullet) must “go on through” the registration scheme to reach the world itself. See section 12.a.

As I put it in *On the Origin of Objects*, doing justice to AI, to the human condition, and to the world requires embracing just the right combination of ontological pluralism and metaphysical monism.
children, in learning a language and taking our place as members of our social communities. Third, the commitments constitute a high standard. None of us meets them all at every instant of our lives, and we certainly need not be continuously conscious of them, but as I will presently argue, if we are adults we are accountable to them, and the civilized and cultural fabrics that enmesh us need to sustain the standards as parts of a civilized society.

To put this in cognitive science terms: to take an object to be an object does not just mean interacting with it, solving the “symbol grounding” problem in a local way, by associating uses of its name with that which it causally interacts with—the way an animal might cotton onto prey, or onto a rag doll, or the way an infant might attach to their mother. Though that kind of counterfactual-supporting interactive connection may be enough for some purposes,¹ it is not enough to constitute something as an object for the system in question,² and therefore not enough to warrant the

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¹. Such as to support a Dretskean information link (see Fred Dretske, Knowledge and the Flow of Information, Cambridge, MA: MIT Press 1981).

². An animal will certainly recognize that which we register as an object in some sense—it is the “objecthood” that is demanding, of which I suspect animals are not capable. Strawson (Individuals, London: Methuen, 1959) describes a simpler form of registration in terms of features—roughly, property-like universals that do not require discrete individuated objects for their exemplification. A standard example is our interpretation of such phrases as “it’s raining,” which, on his account, takes the world to instantiate the feature “raining” without there needing to be any object that is raining. The suggestion is that pets may do something more of this sort—“It’s Tiggering again.” It is even possible that babies initially recognize their parents along similar lines: “Hurrah! More mama!” See Ruth Millikan, “A Common Structure for Concepts of Individuals, Stuff, and Real Kinds: More Mama, More Milk, and More Mouse,” Behavioral and Brain
system’s being called intelligent. We observers might take such behavior as legitimating semantic interpretability; we might take that with which the system interacts to be an object. We might even say that the symbol is “grounded”—that it has determinate semantic interpretation, that being that symbol’s interpretation is not a matter of mere whim. But throughout, in such cases, the whole pattern remains our registration—our object, our deference.

Three examples of failure in the four-fold commitment will illustrate. Many years ago, after a parapsychology talk at Duke’s Rhine Research Center, the speaker asked a few of us, on our way out the door, why no one believed his results—given, he claimed, that his statistics were as good as any published paper in reputable psychology journals. “It is not that your statistics are bad,” Güven Güzeldere observed, astutely. “They could be ten times better, but still no one would believe you. The problem is that no one has any idea of how what you are saying could be true.” The speaker’s claims may have been individually coherent, but, as Güzeldere pointed out, overall they were unaccountable; they did not fit into, or conserve, our sense of the world being the world. And the world being the world is utterly essential. Sans that, all bets are off.3

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3. The point is not to bar hypotheses or observations that challenge deeply held worldviews. Some of the greatest scientific advances have come from just such cases (black-body radiation, for example). Rather, what troubled Güzeldere, and myself, was that the speaker was not prepared to shoulder responsibility for the fact that what he wanted us to believe ran counter to the entire worldview on which we all relied. What the audience was keenly aware of, to which the speaker seemed oblivious, was the enormity of the epistemic and ontological burden that would need to be taken on—at the very least acknowledg-
Dreams, to consider a second example, are to my way of thinking unaccountable in just this way. In fact I believe that it is their very unaccountability that makes it evident, from the outside, that they are dreams. I am in a room with two people; it morphs into an auditorium where someone is giving a talk; the podium they are leaning on is actually coffee cake, which I am eating as I ride my bicycle through the Pyrenees. Whatever! It makes no sense, but that does not matter. I do not go to bat to resolve the inconsistencies; my heart rate does not soar because my grip on reality has loosened.

A third example. Late one night, in graduate school, I was watching a movie in a shared house. The phone rang, startling me because it was about 1:00 a.m. I reached over and picked up the handset (this was the era of phones plugged into walls), whereupon, instantaneously so far as I could tell, the television went off, all the lights in the house went black, the entire neighborhood was plunged into darkness—and the phone kept ringing! In retrospect the whole thing was perfectly explicable; relevant here is merely the intensity of my panic. My heart rate spiked because my world seemed to break. Though tiny, it was a terrifying crack. The threat of losing the world is mortal.

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edged, and ultimately addressed—in order to make his case credible. 4. By coincidence there was a city-wide blackout at the instant that I picked up the phone. Also by chance, the handset I picked up, left by a departing roommate, was not plugged into the wall. The original and continued ringing came from another phone in the room. 5. A split second after the incident, after I realized that I was still in the living room, that the power had gone off, etc., I was overtaken by a much more mundane form of fear: of intruders, of the threat of violence, etc. But that was subsequent to the prior existential fright.
I said above that an integrated network of commitments undergirds our ability to take an object to be an object—to take something to be in the world, to be intelligent. It is not just that we are beholden to objects, and bound by them. We are also beholden to, and bound by, the world as a whole.6

What does it mean to be committed to the world in this sense? I have already said that to take an object to be part of reality we have to keep in mind what is true, what is not true, and what is impossible. Underlying that is a parallel set of norms and commitments about the world as a whole. It is not just objects and local phenomena that we have to register and find intelligible. Registering an object means finding it intelligible in terms of the rules and regularities that constitute the domain within which it derives its existence as the object that it is. But those rules and regularities and practices need to be accountable too. They must support, rather than undermining, the world’s status as world.

Does that mean that we hang onto our constituting conceptual frameworks or registration schemes absolutely—because if we let go of them we die? Almost. We lean in that direction. We have to—in order to maintain our ability to distinguish appearance from reality. But we do not hang on to these constituting schemes tyrannically. We cannot—and we must not. Just as objects or entities are only found intelligible in terms of conceptual or registration schemes, so too are conceptual or registration schemes. The constituting rules and regularities underlying practices

6. That does not mean, at all, that the world is an object. It is not, and cannot be. If this were a different era, we might call it God—at least in Tillich’s sense of “God” being a name for “the ground of being.” The ground of being is roughly what I mean here by the word “world”—that to which I defer, that which is One, that which wins.
and regimes are only legitimate (that is, as the etymology betrays, “can only be read”) if they make sense of the world as world. As well as holding objects accountable to constitutive regularities and norms, so too we must hold constitutive regularities and norms accountable to the world as the ground of being.