HAUGELAND'S EXISTENTIAL ONTOLOGY

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John Haugeland's Having Thought begins with his important contributions to familiar debates about cognitivism, personal identity, and relations between mind and body, but his conception of the "metaphysics of mind" soon leads readers in some novel directions. Haugeland is fundamentally concerned to understand what it is to be, and to articulate how human being discloses being more generally. The distinctively disclosive character of being human is the "existential commitment" expressible in faith or love. Perhaps surprisingly, however, what love makes possible on Haugeland's account is understanding, and in the end, a revealing manifestation of human love turns out to be empirical science. The resiliently skillful practice of science and the resolute determination to hold that practice accountable to the objects thereby discovered thus plays a central role in Haugeland's metaphysics of mind. Science goes beyond any merely socially normative practices (not to mention the biological functionality of organisms or the externally predetermined normativity of AI robots) in its truthful "beholdenness" to objects, and hence its constitutive role in letting objects be.

My comments today will be primarily directed toward these recent directions in Haugeland's work, in the four papers collected in the final section on "Truth," and especially the long paper "Truth and Rule-Following." My critical response to these papers emerges against a very substantial common ground. I thus begin by all too quickly summarizing some fundamental points of agreement.

Among the various positions taken within philosophical discussions of intentionality, Haugeland once took himself to be a third baseman, i.e., one who thought that the normativity of social practices accounts for how intentional holism is compatible with a vapid materialism. Haugeland now thinks that the social institution of norms cannot by itself account for the indispensable accountability of human understanding to the world it understands, without attending to how social practices are beholden to material phenomena. I agree, but since the prototypical all-star third basemen (Heidegger, Dewey, Sellars, Brandom, McDowell) also agree with us, I think Haugeland is still defending the far left side of the infield. The crucial point is that intentionality should be explicated as public, practical normativity.

A second especially far-reaching point of agreement, beautifully expressed in ch. 9, "Mind Embodied and Embedded," is Haugeland's rejection of accounts of mind and world as merely interrelated or interdependent, in favor of the intimacy of mind and world. The ambiguous boundaries between mind and body, or body and world, are not narrow bandwidth transducers, but integral configurations through which, in Haugeland's words, "intelligence abides in the meaningful world: not just books and records, but roads and plows, offices, laboratories, and communities" (p. 236). Much of twentieth century philosophy has striven mightily to reconcile fundamentally incompatible conceptions of normativity and nature; I think Haugeland has taken an important step here toward recognizing and avoiding such residual dualisms of mind and world.

A third area of agreement concerns the "location" of philosophical understanding of intentionality and normativity. Haugeland argues that the rejection of first-person epistemic privilege should not be confused with the adoption of a detached, spectatorial account of intentionality. What we need to understand is involvement in meaningful practices as participants with something at stake. Moreover, understanding first-person involvement is itself

a form of such first-person involvement. The point is not to reject the possibility of objective accountability, but to ask what objective accountability could mean, and how the demand to be objectively accountable could rightly have a hold on us.

Finally, Haugeland and I also agree that scientific practices occupy a pivotal place in the kind of third-base conceptions of intentionality that we each call for, even though our accounts of that place differ. Within the philosophy of mind generally, such a convergence might not be surprising, since the aspiration to correct representation of one's surroundings has often been taken as the paradigm of intentional directedness. Yet as philosophers who instead see understanding as a kind of practical competence, and who appeal respectively to the existential commitment expressed in love or responsiveness to what is at stake in contested situations as exemplary forms of normative accountability, this last point of agreement may be the most striking and unexpected of all.

Against our very substantial shared background, I will highlight four points for critical discussion. These concern Haugeland's fundamental distinction between the constitution of objects and social-normative institution, his conception of truth as beholdenness to objects, his aspiration to discover ontological differences among distinct ways of being, and his account of existential commitment and the responsibility it engenders.

I

Haugeland's concept of constitution emerges from his attempt to disambiguate and further articulate the notion of a "constitutive rule," through which games have been an influential model for understanding the normativity of language and social practices more generally. The central concerns here are to understand both the normative authority of constitutive rules, and their normative force or efficacy. Haugeland draws illuminating distinctions between four kinds of constitutive "rule": regulations that govern what "players" do, standards that govern all phenomena within a game or practice, skills that discern whether phenomena accord with these standards, and commitment to abide by skillfully applied standards. My concern is not with these distinctions themselves, but with three further, interrelated distinctions that do important work for Haugeland. The most fundamental of the three distinctions that concern me is between the constitution of objects as that to which constitutive standards are accountable, and the merely instituted normativity of practices for which there is no higher authority than the "general telling" of the community that engages in them. A community as a whole supposedly cannot be mistaken about the correct performance of greeting gestures or the correct pronunciation of words, whereas it can be mistaken about the chemical structure of water or the possibility of weak neutral currents. A second related distinction is between science and games. In the contrast to science, Haugeland argues, "the artificiality and ultimate inadequacy of chess and all game analogies come most blatantly into the open" (p. 343). The intelligibility of science turns on matters beyond the control of those who engage in scientific practice, so that "the essential difference between science and games is that the enterprise itself is always in question" (p. 343). Scientific practice can fail empirically in a way that chess cannot, and Haugeland spends considerable effort imagining variants of chess that would occupy intermediate positions between correct play or performance, and genuinely objective correctness. The third distinction is between the general and quite formal category of objects, which include such non-substantial items as rooks, beliefs, or numbers, and the specific

objective domain of things, "integral individual bearer(s) of multiple variable properties" (p. 348).

The reader may be initially tempted to align these three distinctions quite closely: science would then constitute objective things by its empirical vulnerability to standards beyond its control, whereas games would exemplify a merely instituted accountability to community norms. That will not do, however. Chess phenomena are also constituted on Haugeland's account (as are the non-substantial patterns discernable from the intentional stance), so that the difference between science and chess is a difference between constituted domains rather than between constitution and institution. At the other end, electrons or quarks, electromagnetic fields, or ecological niches are not "things" by Haugeland's criteria, not to mention the objects of cognitive science, anthropology, or economics, so that the empirically vulnerable standards of sciences turn out not to be just "more specific, more explicit, and (above all) stricter" than the constitutive standards for the ontology of things (p. 351), but instead crosscut these categories.

Here I shall argue for two points in relation to these distinctions: first, that Haugeland has misconstrued the significance of the differences between sciences and games, and second, that "socially instituted normativity" turns out to be an empty category, a philosophers' fiction that we should reject. In ironic reversal of the view Haugeland attributes to his own earlier philosophical incarnation, I conclude that "all institution is constitution."

For Haugeland, the empirical invulnerability of games seems to be rooted in their being player-centered.

> In games like chess and baseball, all the "action" is initiated and largely controlled by the players; the constituted paraphernalia, by contrast, are required merely to remain suitably at their disposal–a kind of compliance and inertness clause." (p. 321).

There are problems from the outset in this distinction between players and other constituted paraphernalia. In the latter case, Haugeland notes that baseball could not require that the pitched ball hang in midair before it then hurtles on toward the plate, but it also cannot require that the pitcher throw the ball to the batter from 500 feet away. Games are answerable to the capacities of all their constituents, players and paraphernalia alike.

Yet answerability to the capacities of objects supposedly makes science uniquely vulnerable to normative failure. If things turn out not to comply in the right way, we may have to give up the enterprise in its present form by fundamentally altering "the very skills and concepts that are the form and substance of the domain itself" (p. 343). Haugeland is wrong about games, however, for their constitutive standards are also empirically vulnerable. A provocative example arises in Bobby Fischer's recent proposal for a fundamental revision in the constitutive standards of chess. Fischer argues that the extensive documentation of standard openings and responses, augmented by computer analysis, has fundamentally transformed chess such that a traditionally skillful player can be defeated by brute mnemonic force. Fischer claims that this development removes the point of chess as a test of intellectual skill and fortitude. He then proposes a fundamental revision of the constitutive standards of chess, in order to be true to the game.[1]

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[1] Fischer's proposal is that the placement of pieces on the back rank shall be determined randomly at the outset of each game, thereby defeating the analysis of standard openings and requiring thoughtful analysis from the very first move.

Fischer may or may not be correct in his diagnosis of the present state of chess, and his prescription may or may not be an adequate or appropriate response. My point is that his claim is intelligible and debatable by appeal to empirical evidence. If the practice of chess-playing were to evolve such that the game became a test of memory rather than of analytical skill, or that the outcomes were predictable as in tic-tac-toe, then the point of playing the game would have been lost, and a revision or repair of its constitutive standards would be called for by the evolution of play itself.

A similar oversight afflicts Haugeland's conception of merely instituted norms. Haugeland cites greeting gestures, folk dance performances, and conventional traffic regulations as examples of norms for which the community's "general telling" could not in principle be wrong.[2] If everyone agrees to greet one another in a distinctive way (and to respond differentially to those whose greeting gestures fail), or to drive on the right rather than the left, then there may seem to be no standard according to which they could be wrong. Haugeland's analysis suppresses the community's normative accountability to what is at stake in such practices, however. In the traffic case, driving on the right or the left is entirely up to the community only because of a conceptually prior determination that this choice makes no difference to what is at stake in driving practices. If predominant human neural organization turned out to cause more accidents in countries where oncoming traffic was to drivers' left, if maintaining an unusual national standard were to be economically disastrous to automobile or tourist industries, or if converting to the dominant practice elsewhere would undermine national identity in ways that matter to its inhabitants' lives, then the community as a whole could be wrong about which standard to adopt.[3] Likewise, whether a greeting gesture is performed incorrectly rather than merely differently depends upon what is at stake in their performance (e.g., recognition of an intention to greet, reaffirmation of community, submission to authority, or elegance of bodily presentation). The first moral to draw from Haugeland, then, is that "objectivity" does not uniquely express an accountability of practices to something authoritative over the community participating in them. Granted, it may not yet be fully evident what is at stake in a practice, the stakes may themselves be contested and may change over time, but none of these points reduces what is at stake in the "institution" of norms to what the community merely happens to agree upon.

With this background in mind, we can then see how Haugeland is mistaken in his characterization of the stakes in scientific practices. Haugeland only allows for scientists' accountability to the "objective correctness" of their theories, and presumably to the correlative revelatory significance of their experimental and instrumental manipulations. Incorrectness is

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[2] Haugeland appeals to the community's "general telling" to allow for the possibility that, coincidentally, each individual member of the community happens to misperform in the same way at once. On such occasions, everyone in the community would be mistaken, but only because the community as such remains in principle incorrigible.

[3] I leave open for the moment how it is determined whether traffic safety, economic viability, or national identity are or should be at stake in driving practices, and whether these stakes are worthy of making an issue of the organization of those practices.

neither the only nor always the primary way in which scientific work can go wrong, however. Achieving results that are trivial, imprecise, uninteresting, inelegant, misleading, or confused also mark fundamental failures in scientific work. Moreover, incorrectness itself is not as simple and straightforward as Haugeland makes it appear. He recognizes the complexities introduced by the holism of hypothesis testing, such that resilient adjustments of mundane and constitutive skills are needed to maintain a "precarious equilibrium" in the face of apparently incompatible results. What he does not recognize is that the constitutive standards of the sciences are themselves rich and complex, focused by what makes the practice and its outcomes significant. This point emerges especially clearly in Peter Galison's and Lorraine Daston's recent work on the history of scientific objectivity, which includes extensive discussion of the changing constitutive standards for the production of scientific atlases, handbooks, and other compendia of canonical presentations of established knowledge.[4] "Objectivity" is not one generic virtue, but a contested, historically specific field, in which scientific practitioners are accountable to what has shown itself to be at stake in their reflexive engagement with the world and their own practices.

Should we then conclude that sciences are just like games? Of course not. There are many important differences in what is at stake in games and sciences, and how those stakes are attended to in the standards, skills, and commitments that govern the practices. My point is that these differences are not usefully expressed in terms of generic structural differences between fundamental kinds of normative accountability and vulnerability to failure. It is only when one discusses the normativity of scientific practices at too high a level of generality and abstraction that it becomes less distinguishable from the normativity and empirical vulnerability of games (discussed with comparable generality).

II

My second point, concerning Haugeland's discussion of truth as beholdenness, emerges directly from the preceding discussion. One reason that truth is central to Haugeland's concern with the metaphysics of mind is his conviction that some prominent all-star third basemen (like Brandom and Sellars) or utility infielders (like Davidson) fail to account for the objective normativity of human understanding, settling for merely instituted normativity or coherence of beliefs. Thus, he says that Brandom "can show that there is no legal move, in [his] system, from 'Everybody believes p' to 'p', but [doesn't] begin to show anything at all about what could legitimate 'p' instead, [or] how 'p' could 'answer to how things actually are'" (p. 358, n14). Brandom's consequent failure to have an adequate conception of truth, according to Haugeland, is twofold: his understanding of normativity as deontic rather than existential cannot take us beyond merely socially instituted normativity,[5] and his "phenomenalist" route from discursive

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[4] Daston and Galison, "Moving Image of Objectivity"; Galison, "Judgment Against Objectivity"; Daston, "Objectivity and the Escape "; Daston, "Baconian Facts, Academic Civility, and the Prehistory of Objectivity."

[5] And therefore cannot even successfully understand social normativity, whose intelligibility Brandom also agrees must be accountable to objects. Similarly, Haugeland believes, Davidson's "coherence theory" cannot account for the intentionality of beliefs because it leaves no place for their being accountable to objects rather than other beliefs.

practices to objective accountability cannot genuinely get to objects. I locate their disagreement differently: Haugeland still aspires to say something general about what "could legitimate 'p'," whereas for Brandom (or Davidson), "there is no bird's-eye view above the fray of competing claims from which those that deserve to prevail can be identified" (Making It Explicit, p. 601)

I am sympathetic to Haugeland's conception of truth as beholdenness, but I shall argue that he is mistaken in his conception of objects as what our practices are beholden to. My route to this point may initially seem circuitous, however. I begin by noting a strategic contrast between Haugeland's approach to understanding intentionality and those he criticizes as lacking an adequate conception of truth. Whereas Brandom and Davidson begin by discussing discursive practice and propositional contentfulness, Haugeland begins instead with resilient skillful practical dealings with the world, and never explicitly discusses discursive practices at all. I have no doubt that Haugeland's account could (and should) be interestingly extended to display the constitutive standards and the resilient constitutive and mundane skills that would constitute language, discourse, sentences, or words. That Haugeland does not undertake such an extension, however, shows how strongly he accords explicative priority to practical responsiveness over discursive articulation. This difference in strategy may then seem to exemplify a sharp divide between those who claim that all understanding (or cognitive content) must be expressible in language, and those, like Haugeland, who take seriously the possibility that language presupposes a bodily or practical "background" intentionality that cannot be made explicit.

I argue elsewhere that this difference is merely apparent, and that when properly worked out, these two starting points are interchangeable.[6] If I am right, Brandom's strategy of explicating practical/perceptual coping as inferentially significant components of discursive practice, and Haugeland's implied strategy of explicating semantic contentfulness as constituted by resilient practical/perceptual skills, ought to converge in their outcomes. Such convergence is blocked, however, by a crucial ambiguity in Haugeland's account. Sometimes, Haugeland argues that constitutive standards govern (and, in conjunction with constitutive skills, thereby constitute) the phenomena that (can) occur within a constituted domain.[7] At other times, however, he speaks of standards and skills as making constitutive contact with objects. In the former case, for example, the constitutive standards and skills of chess rule out the phenomenon of a-rook-moving-along-a-diagonal. In the latter case, the constitutive standards and skills rule out the identity of a rook and a diagonal-mover. This amounts to the difference between semantic theories that accord primacy to the propositional, explicating reference through its contribution to truth, and those that explicate truth in terms of reference. Haugeland is drawn to the latter strategy, both because he aspires to link the objective accountability of practical norms to the modal characteristics of objects, and because he hopes to "delineate the basic structure of objectivity independently of any particular doctrine of judgment [to represent combination in the

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[6] Joseph Rouse, Scientific Practices and Philosophical Naturalism (book manuscript in progress), ch 8.

[7] This locution appears most prominently in section 7 where he introduces the concept of constitutive standards, but also in section 12 where he also describes the "excluded zone" in terms of phenomena.

object] (p. 332, 358-59 n.21).

Yet by beginning with practical skills for recognizing objects, and only then accounting for the practical correlate of judgment as combination-in-an-object (p. 358-59, n21), Haugeland does not remain independent of particular doctrines of judgment.. Moreover, I strongly doubt that Haugeland can successfully account for judgment or modality in this way. His argument for this strategy turns upon his account of constitutive skills and standards. In chess, for example, he claims that

> the skills for recognizing pieces and moves must be separate and exercisable independently of one another. To recognize a piece of a certain type moving in a certain way involves (at least) three recognitive abilities: for the type of piece, for the way it's moving, and for, so to speak, their combination (in the same piece)" (p. 332).

Haugeland's argument for this claim is insufficient, however. It is true that "recognizing that something is a rook cannot amount simply to recognizing that it is presently moving along a rank or file" (p. 331). That truth by itself, however, does not determine how best to account for it. One might, as Haugeland suggests, proceed from object-recognition skills, but one might better proceed instead from practical-inferential capacities for dealing with phenomena. Recognizing something moving along a rank does not commit me to its being a rook, but it removes my entitlement to regard it as a bishop, while preserving whatever entitlement I had to take it as a rook. The incompatibilities that establish an "excluded zone" of conceivable but impossible phenomena need not be grounded in distinct skills for recognizing objects and their behaviors; they may instead be the ground for recognizing object-boundaries. Indeed, Haugeland's suggested strategy of distinguishing three recognitive abilities has an underlying problem: how does the third recognitive ability actually connect in practice to the objects recognized by the other two, rather than just adding an additional, independent "objectification" of the situation? If one needs the explicit practical recognition of combination-in-an-object to bring together the first two, it is unclear how that need could be satisfied by an additional practical recognition skill, whose relation to the first two would seem to present a problem similar to that they present to one another.

III

I have discussed Haugeland's ambivalence about the relation between objects and phenomena at some length, because I think the priority he accords to objects in accounting for the supposedly distinctive constitutive normativity of empirical science is mistaken. The reason for his ambivalence seems clear to me. On the one hand, the actual normative accountability of scientific practices applies to phenomena: what are excluded as "conceivable but unintelligible" by the understanding embedded in current theoretical models and experimental practices are impossible phenomena, not impossible objects. Yet Haugeland will not settle for that, because he still wants to do early-Heideggerian ontology, distinguishing different ways to be that are constituted by different practical stances. Accountability to phenomena does not make for an ontological difference between games, where correctness and excellence of performance supposedly exhaust normative accountability, and science, in which even correctly performed discriminations can yield incorrect determinations.

Here emerges my third point of contention. Haugeland's adaptation of Dennett's "stance stance" is supposed to do ontological work: differerent stances supposedly disclose different

ways of being. For both Dennett and Haugeland, "the being of the intentional and the being of the physical are central to the account" (p. 282-83), but for different reasons. For Dennett, all stances are on a par ontologically, and the physical, design, and intentional stances are interesting only because of their predictive success relevant to our purposes. For Haugeland, the being of the intentional and the being of the physical (of Dasein and Vorhandenheit) are importantly different ontologically from the ways of being disclosed from any other stance. The physical must be different because scientific practices are empirically vulnerable to the objective domain they constitute, and not merely to the performative norms that they institute. Meanwhile, human understanding must be different from what the phenomena constituted through any particular stance disclose, because it embodies "the underlying unity that binds [the various constitutive stances] all together, that makes them all distinctions among ways of being" (p. 283). Thus, genuine (human) intentionality is supposed to involve the existential commitment that constitutively discloses being at all, by insistently holding oneself and other people and things accountable to norms. That is why animals and computers can only have "ersatz intentionality" for Haugeland, and why the third-person pattern disclosed by the intentional stance in the end does not adequately disclose intentionality: it cannot express the first-person involvement and commitment that Haugeland finds indispensable to normative accountability.

So why do I think Haugeland is wrong to confer such Heideggerian-ontological significance upon the physical and the intentional, or more precisely, upon objective, social-normative, and existential ways of being? My objection is not to Haugeland's account of constitution as "letting be," or to his distinction between disclosure and discovery, but to his attempt to articulate essential, ontological differences between various ways of being. I begin with Haugeland's well-known arguments in the earlier chapters against the token identity thesis, which have forcefully shown that the supervenience of the intentional upon the physical should not be construed as an identity between mental states and the state of any particular physical thing. The mental supervenes upon the physical only globally, and in any case, the relation between mind and world should not be regarded as an interface, but as an intimate entanglement. Likewise, Haugeland has argued that social-normatively constituted objects like chess pieces are not identical with any physical substance: rooks are not plastic figurines, ivory carvings, or physical tokens of standard chess notation. All true.

What Haugeland's own accordance of "excluded zones" and "power to the phenomena" properly show, however, is that the "object systems" constituted within scientific practices are not things either. Science discloses, and is accountable to, not objects, but objects-in-phenomena.[8] This point is already well-known from quantum mechanics, for which there is no coherent explanation of measured phenomena in terms of definite positions and momenta assignable to well-defined objects. I have argued elsewhere, following Karen Barad, that we should understand this feature of quantum physics as assigning measurement outcomes to the

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[8] Compare Karen Barad, "Meeting the Universe Halfway: Realism and Social Constructivism Without Contradiction," in Nelson and Nelson, ed., Feminism, Science, and the Philosophy of Science, Dordrecht: D. Reidel, 1996, p. 176: "Phenomena are constitutive of reality. Reality is not composed of things-in-themselves, or things-behind-phenomena, but things-in-phenomena."

entire (reproduceable) arrangement or configuration of apparatus-cum-object that locates the practical cut between agencies of observation and object within that phenomenon. Moreover, I have argued that this priority of phenomena over the objects constituted within them is not limited to microphysics, or to the physical: macroscopic trajectories and their causal determinants, organisms and their selective environments, or meanings and truths acquire definite bounds only within phenomena, the reproducible patterns of practical intra-actions. Haugeland cites mass as an exemplary non-relational property of a thing, but that is not so. Mass only becomes assignable to an object (thing) through its resistance to acceleration in reproducibly configured phenomena: spring balances, gravitational "systems," elastic or inelastic scatterings, etc., in which the correct assignment of mass is a component of the conservation of energy within the entire system.

An interesting result of this recognition is that some of Haugeland's ontological concerns become beside the point, and the proper sense in which we should all be "vapid materialists" for whom everything temporal and contingent is material becomes less problematic to express. Haugeland's account of the weak or global supervenience of the mental upon the physical was intended to undermine any attempt to identify mental states or performances with determinate states of perduring physical objects, and one step in his argument was to show that even some physical phenomena, such as the intersection of a wave with a bobbing cork, were not identical with determinate states of perduring physical objects. What Barad's and my arguments suggest is that no physical phenomena are token-identical to determinate states of perduring physical objects, and hence that nothing distinctive about the way of being of the intentional is manifest in its non-token-identity with the physical. In Haugeland's own words, "the problem lies with expressing the primacy of the physical in terms of identities" (p. 103), even in the case of the physical itself: the objects of scientific measurements are not identical with any substance, any more than rooks or beliefs are. Yet that also means that the sense in which every intentional phenomenon is manifest in physical intra-actions becomes all the more unproblematic to understand, since it entails no object-identities. The intentional is physical in the sense that its interpretation must always be normatively accountable to publicly accessible marks on bodies in the phenomenon of intentional (and intentional-attributive) interpretation.

If we are not to construe the stakes in scientific understanding as marking the kind of ontological difference Haugeland seeks between institution and constitution, however, then how should we construe the normative accountability of scientific understanding? An important clue comes when we consider the temporal orientation of scientific practices and the understanding they articulate and thereby realize. Haugeland starts out right by thinking of science in terms of ongoing research rather than the retrospective assessment of knowledge. It is the resilient ongoing adaptation of scientists' constitutive and mundane skills to account for newly discovered phenomena, entities, or features thereof that characterizes their constitutive disclosure of the world. Yet Haugeland then feels compelled to express the normative accountability of such forward-looking constitutive practices as accountability to objects already there. To be sure, there is a crucial sense in which the physical world is already there; the problem is that it is not yet there in its intelligibility, nor in its articulation into objects, without appropriate practices and norms..

To capture the temporality of scientific practices adequately, we need to express their

accountability in appropriately futural rather than retrospective terms. Hans-Jorg Rheinberger offers an attractive suggestion for how to do so. For Rheinberger, scientific research is "about," and accountable to, not already determinate objects, but "epistemic things." Rheinberger agrees with me that the proximal focus of research practices are repeatable material configurations (phenomena), in the form of experimental systems. Such systems are directed toward the disclosure of something not yet adequately understood and articulated, yet sufficiently stabilized by the technical conditions of experimental practice to be an intelligible object of inquiry:

> "Epistemic things" are material entities or processes–physical structures, chemical reactions, biological functions–that constitute the objects of inquiry. As epistemic objects, they present themselves in a characteristic, irreducible vagueness. This vagueness is inevitable because, paradoxically, epistemic things embody what one does not yet know. Scientific objects have the precarious status of being absent in their experimental presence; they are not simply hidden things to be brought to light through sophisticated manipulations.[9]

Rheinberger introduces the notion of epistemic things to express how the material systems that focus scientific research always outrun our projections and conceptualizations of them, precisely the point that Haugeland hopes to account for in terms of objective correctness.. Without some technical control of their components and conceptual grasp of their configuration, experimental systems cannot even pose explorable questions; yet to the extent that these systems are interesting or important, genuinely disclosive of the world, they undo their own conceptualization. As Rheinberger notes,

> Experimental systems grow slowly into a kind of scientific hardware within which the more fragile software of epistemic things–this amalgam of halfway-concepts, no-longer-techniques, and not-yet-values-and-standards–is articulated, connected, disconnected, placed, and displaced. Certainly they delineate the realm of the possible. But as a rule they do not create rigid orientations. On the contrary, it is the hallmark of productive experimental systems that their differential reproduction leads to events that may induce major shifts of perspective within or beyond their own confines.[10]

Haugeland significantly shares some of Rheinberger's concerns. In characterizing the "constitutive standards" that let there be objects that satisfy them, he recognizes that scientists' skills and conceptualizations must be resilient, open to revision and repair in the face of the recalcitrance of things. Yet Haugeland insists upon severe limits to such internal transformations, in order to allow for the possibility of differences between two kinds of error: incorrect performance and incorrect determinations by correct performance: "by ruling out the bulk of conceivable combinations, [constitutive standards] bind the totality of actual results within the narrow bounds of possibility, ... and allows them to "gang up on" isolated performances whose results are incompatible with the overwhelming majority" (p. 338). His homage to Popperian falsificationism is his insistence that the constitutive standards of scientific

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[9] Hans-Jorg Rheinberger, Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube, Stanford: Stanford University Press, 1997, p. 28.

[10] Rheinberger 1997, p. 36.

practice be unequivocally vulnerable to the prior determinacy of things, such that the enterprise itself can be in question.

I respond by noting the inherent and productive ambiguities between the two forms of accountability, to procedural norms and to the things disclosed through their performance. Similarly, in his discussion of what Haugeland would call the normative accountability of the mundane and constitutive skills of research, Rheinberger insists upon the openness of such skills to something unprecedented and unexpected, and the consequent need not to allow such skills to become rigidly determinate and hence confrontational.

> The [experimental] web must not become too rigid. In deliberating upon the manner in which a system is to be handled so as to let the unknown intrude and invade it, Max Delbruck has spoken of a "principle of measured sloppiness." "If you are too sloppy, then you never get reproducible results, and then you can never draw any conclusions; but if you are just a little sloppy, then when you see something startling you [nail] it down."[11]

Haugeland also wants to allow for openness to the unexpected, but in his remarkable amalgamation of Popper, Heidegger, and Kuhn, he sees such openness in terms of an authentically resolute openness to giving up one's whole way of proceeding, a kind of existential falsification rather than as the normal position of research within the penumbra of the known.[12]

In these different conceptions of the normativity of experimental science, Haugeland and Rheinberger agree in taking scientific practices to be fundamentally accountable to material phenomena. Where they disagree concerns what is at stake in such accountability. For Haugeland, the sciences become accountable to what their skills disclose by holding insistently to determinate constitutive standards. Their skills (including conceptual skills) can thereby be vulnerable to the objects discovered in scientific practice.[13] Rheinberger and I in effect take issue with Haugeland's commitment to the prior "semantic" determinacy of the constitutive standards of scientific practice, and thereby with his claim that what is at stake in science is simply the objective correctness or incorrectness of those standards. Haugeland's existential conception of science thus expresses a Popperian commitment to confer a definite interpretation upon the sciences' constitutive and mundane skills (including, presumably, their conceptual-articulative skills), so that those skills can provide a definite measure of the world semantically. Rheinberger

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[11] Rheinberger 1997, p. 78, citing Delbruck's correspondence and oral communications as presented by Fischer and Lipson 1988.

[12] Haugeland explicitly discusses scientific practice as exemplifying Heideggerian authentic resoluteness not in Having Thought, but in a forthcoming paper, "Truth and Finitude." Allusions to the Heideggerian roots of his reading of Popper and Kuhn nevertheless abound throughout the book.

[13] I use the word 'discover' quite deliberately here. Haugeland (p. 331) follows Heidegger in distinguishing ordinary or mundane "discovery" of specific findings within a practice, from the disclosure or "meta-discovery" that the practice is intelligible at all. In these terms, I am arguing that Haugeland still takes what is at stake in the sciences to be the correctness of their discoveries rather than the specific configuration of their disclosure.

(and I) claim instead that scientific research always resides within the productive ambiguity of such ongoing experimental intra-action. What is at stake there is not correct discovery of objects and their properties, but the disclosure of epistemic things as binding upon us through what is at stake in their disclosure. The stakes in scientific research are not what nature is, but what it is to be nature; contrary to Heidegger's famous pronouncement, science does indeed "think."

IV

I now want to return, as my final point, to the ontological distinction Haugeland makes between human beings and other putatively intentional systems, based upon our capacities for "existential commitment" and love. He claims on this basis that genuine intentionality is not adequately expressed by the intentional stance, which can of course be taken toward animals, computers, or thermostats as well as human beings. I think Haugeland is right in two crucial respects, but still mistaken in another. First, there is a crucial difference between the intentional directedness characteristic of human understanding, and that plausibly attainable by computers or (most) animals. This difference arises in my view because what makes accounts for genuinely normative responsibility belongs not to what is disclosed through the intentional stance, but through the intentional-attributive stance, which involves a mutual recognition as intentional. Hence, those systems that can rightly be ascribed intentional content, but cannot be ascribed the attribution of intentional content to themselves and others, are "intentional" in only a secondary and derivative way. The emphasis upon mutual recognition comes from Brandom rather than Haugeland, of course. Yet what is crucial to such mutual recognition was not just the I-thou social relationship that Brandom identified, but the possibility of having something at stake in understanding (one's situation in) the world, that matters in ways that are not up for choice.[14] And that is the second point on which Haugeland is right about what it is to be intentionally directed: the reason that machines cannot understand and thereby embody full-fledged intentionality, "is that computers don't give a damn" (p. 60). Where I believe Haugeland's conception of being-intentional is still problematic, however, is in his account of "existential commitment" as what amounts to "giving a damn" in the relevant sense.

There are two issues that concern me about existential commitment. Haugeland

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[14] Haugeland emphasizes a different way of distinguishing human intentionality from the functional normativity of animals. What supposedly marks the distinctive intentionality of human beings is understanding, whose norms extend beyond mere correct (or functional) performance to objective truth. That is, what human beings supposedly have and animals do not is a recognition of and responsiveness to a difference between being functionally right and factually wrong (p. 310). But that difference integrally concerns semantic contentfulness together with truth-beholdenness. Haugeland rightly notes that a bird with a mechanism for detecting and avoiding yellow butterflies that evolved in an environment where most yellow butterflies are poisonous cannot be regarded as having mistaken a rare nonpoisonous butterfly for a poisonous one, but that is so precisely because "there is nothing that [its] response can "mean" other than what actually elicits it in normal birds in normal conditions" (p. 310, first emphasis mine). I think Haugeland does not pay enough attention to the intra-dependence between truth and meaning, and in his zeal to get beyond a merely socially-instituted normativity, has not done sufficient justice to the mutuality of understanding and intentional-attributive recognition.

characterizes such commitment as a "dedicated or even a devoted way of living, a determination to maintain and carry on," an "insistence" upon constitutive standards, whose "governing or normative 'authority' comes from nowhere other than itself [through] self-discipline and resolute persistence" (p. 341). The problem is that a self-determined commitment could have only the semblance of authority over us, and hence could not genuinely constitute a world to which our expressions, activities and skills are responsible. As Kierkegaard trenchantly expressed the point, the authority that existential commitment could "find" through insistent self-determination is like the authority of a monarch in a country in which revolution is legitimate.[15] If the responsibility of the sciences (and not merely their exercise of that responsibility) to the phenomena that govern its measurements and conceptualizations is dependent upon scientists' dedication, then even those who maintain such insistence could make no claim upon the practices of others, and hence could find no authority in objects themselves. What we need to understand is how we can belong to a situation whose stakes have a hold on or over us. Disclosure (constitution) cannot be something we accomplish, but can must happen through us, as a meaningful configuration of the world we find ourselves in, rather than a chosen commitment.

In fairness to Haugeland, he would likely disavow the voluntarism that might be inferred from locutions like 'insistence' or 'commitment'; I take it that the "existential" character of such commitment is invoked precisely to indicate that we are committed to constitutive standards (in the passive rather than the active voice, as in Heideggerian "thrownness"), "simply" through continuing to be who we are. But then I do not quite grasp how Haugeland is proposing to account distinctly for the normative force and the normative authority of existential commitment. If a self-determined commitment to constitutive standards is irrevocable, then how are we to understand our frequent failures to live up to the responsibility that such commitments establish, and the authority (rather than just de facto inevitability) of claims that we ought to do so? If our beholdenness to objects is revocable, on the other hand, then Haugeland may not have renounced voluntarism after all. Elsewhere Haugeland adapts Heidegger's conception of authentic resoluteness to suggest how one could be open to "taking back" one's existential commitments not "willfully," but out of faithfulness to those commitments themselves.[16] The adequacy of that approach, however, may be in question in my second point about existential commitment.

This second issue concerns by and to whom such commitments are made. Haugeland rightly insists that "any player of chess ... has an investment in the legality of all the moves in the game, regardless of whose moves they are; ... if you are to keep playing–you who are involved in this game as a player–then you must insist that both your own and your opponent's moves be legal" (p. 340). Likewise, scientists must insist upon taking seriously and responding appropriately to apparent breaches of the excluded zone that constitutes their domain. Haugeland notes that the "first personal" character of existential commitment "doesn't mean particularly the

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[15] Soren Kierkegaard, The Sickness Unto Death (with Fear and Trembling), tr. W. Lowrie, Princeton: Princeton University Press, 1954, p. 203.

[16] "Truth and Finitude: Heidegger's Transcendental Existentialism," forthcoming in a festschrift for Hubert Dreyfus, edited by Mark Wrathall and Jeffrey Malpas, to be published by MIT Press.

first-person singular" (p. 339). Yet he does not claim, or account for, how it might particularly mean the first-person plural instead, an ironic oversight for one who sees "love [as] the mark of the human" (p.2). How does my insistence that others play legal chess or do painstaking science authoritatively bind others (and vice versa), apart from the institutional sanctions that get one thrown out of the tournament or barred from research and publication? An important part of Haugeland's answer is undoubtedly that only thus can we play chess or do science, and that these practices involve us through our appreciative (and self-constitutive) grasp of what Alasdair MacIntyre once characterized as "goods internal to [such] practices."[17] "Understanding" in Haugeland's distinctive sense incorporates such an appreciative and constitutive grasp of the "good" realized by participating jointly in practices, and that is why first-person involvement is so important: the insistence upon playing legal chess or doing rigorous science holds little force for those who do not "get" why commitment to or success in these practices matters.

Yet there are two issues here which Haugeland's discussion of existential commitment does not yet illuminate. One is understanding how such failures to "get it" can be genuine normative failures: an inability to be moved by the "goods" constituted in practices, at least in some cases, marks a diminished humanity and/or a failure of responsibility to others. A second, and perhaps more challenging issue arises precisely when, in Haugeland's own terms, "the enterprise as a whole comes into question." Some practitioners conclude that the constituted disclosure of a domain of phenomena must be given up out of "existential" fidelity to its constitutive standards, or they proceed in novel directions that seem to their colleagues to amount to having given up, but their colleagues demur. I fear that Haugeland's conception of autonomously constituted domains of entities takes over from Thomas Kuhn the most problematic feature of his understanding of incommensurably working in different worlds (p. 353), namely, an inability to account adequately for how incommensurable practices and the object-domains they constitute could make (or resolve) claims upon one another. There is ample room to develop Haugeland's conception of existential commitment, and these two concerns might then dissolve. I suspect, however, that can only happen if Haugeland pays greater attention to the social and political dimensions of the constitution of object-domains, and softens the autonomy he seems to confer upon stances and the object-domains they constitute.

I conclude simply with the hope that my discussion has shown how deeply engaged I have been with Having Thought, and how much I have learned from and been challenged by it. This is an important and illuminating collection of papers, one that amply repays continuing study and reflection.

Joseph Rouse
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[17] Alasdair MacIntyre, After Virtue, Notre Dame: University of Notre Dame Press, 1981, ch. 14.

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