DISENCHANTING THE WORLD: MCDOWELL, SELLARS, AND RATIONAL CONSTRAINT BY PERCEPTION

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ABSTRACT: In his book *Mind and World*, John McDowell grapples with the problem that the world must and yet seemingly cannot constrain our empirical thought. I first argue that McDowell's proposed solution to the problem throws him onto the horns of his own, intractable dilemma, and thus fails to solve the problem of rational constraint by the world. Next, I will argue that Wilfrid Sellars, in a series of articles written in the 1950s and 1960s, provides the tools to solve the dilemma McDowell sets before us. We will see how, borrowing from Sellars and certain neo-Sellarsians, we can solve the problem of rational constraint by perception without resorting to a McDowellian quasi-enchantment of the world.

O ne of the most intransigent problems in epistemology is the question of how to reconcile the following pair of seemingly inconsistent commitments. First, causal inputs from the world place rational constraints on our empirical theories. Second, these same causal inputs are non-conceptual, and hence without epistemic import. Denial of either of these commitments does not seem promising. Denial of the first seems to entail the "frictionless spinning"

of our theories: our empirical theories are not constrained by inputs from the physical world, and hence the truth of our theories is called into question. Denial of the second, it is thought, leads to an acceptance of the discredited doctrine of the Given: the doctrine that a non-conceptual item can have epistemic import. Thus, we find ourselves oscillating between rejection of each of these, "seesawing" between frictionless spinning and the Given.

In his important book *Mind and World*,[1] John McDowell attempts to "dismount from the seesaw"[2]: he attempts to explain, without falling into the myth of the Given, how the world can rationally constrain our thought. In the first part of this paper, I will argue that McDowell's proposed solution to the problem throws him onto the horns of his own, intractable dilemma, and thus fails to solve the problem of rational constraint by the world.

However, we should not abandon hope of finding a solution to the problem. In the second part of the paper, I will argue that the outline of a (correct!) account of how perception rationally constrains belief is contained in a series of articles written by Wilfrid Sellars in the 1950s and 60s. However, different elements of the solution are contained in different articles; also, many crucial details are omitted by Sellars. In this paper, I attempt to provide these missing details, and integrate these elements into a coherent story. We will see how Wilfrid Sellars provides the tools to solve the dilemma McDowell sets before us, and how, borrowing from Sellars and certain neo-Sellarsians, we can solve the problem of rational constraint by perception without resorting to a McDowellian quasi-enchantment of the world. I conclude that although Sellars is often described as a coherentist, the account of perception that emerges from Sellarsian roots is neither coherentist, foundationalist, nor reliabilist. Thus, a Sellarsian account of perception provides an alternative to the dominant contemporary accounts of knowledge, and precisely for this reason is able to solve a puzzle that has, in my view, resisted solution by these dominant theories.

I. THE PROBLEM OF RATIONAL CONSTRAINT

In *Mind and World*, McDowell is able to make particularly acute the problem of how our empirical thinking is rationally constrained by the world. For our theories to be *about* the world (i.e., for them to be empirical), the way the world actually is must place rational constraints on our theory; our theories must be answerable to the world.[3] But, McDowell argues, certain strands in contemporary philosophy make it difficult to see how the world could rationally constrain thought. As he sees it, contemporary philosophy is caught on the horns of a dilemma. On the one horn is the myth of the experiential Given; on the other is an unconstrained spinning in the void. Let us briefly examine these two horns.

The myth of the experiential Given is the idea that any experience or sensation could be epistemically significant merely in virtue of its occurrence. This

is one of the targets of Wilfrid Sellars's seminal essay "Empiricism and the Philosophy of Mind."[4] Although Sellars attacks the Given in many forms in his article,[5] we are here primarily concerned with only one of his targets. This target is the doctrine of the Given as it appeared in traditional foundationalist epistemology. In this context, the Given is an episode (in this case, a sensation) which, merely in virtue of appearing, justifies some belief or other. For example, my belief that this tie is green is, on this view, wholly justified by the presence of a green sensation or sensing. Famously, Sellars demolishes this notion of the Given, arguing that sensations cannot play this justificatory role. Sellars writes that philosophers traditionally have been persuaded

> that there is an immediate experience of facts, a knowing of facts—a limited domain of facts involving only "sense qualities" to be sure, but facts none the less—which is anterior to the development of symbolic systems, and which, even when a symbolic system has been acquired, is what justifies or provides the authority for occupying a position in a language game. There is, of course, no such thing. . . . Sensations are no more epistemic in character than are trees or tables.[6]

Sensations are, on Sellars account, non-epistemic and non-intentional; they are not about anything.[7] But we are in a position to see how rejection of the experiential Given has thrown us on to the other horn of McDowell's dilemma: if sensations are non-epistemic and non-intentional, then how can they possibly tell us anything about the world? As Davidson puts the point, "nothing can count as a reason for holding a belief except another belief."[8] Or, to state this requirement in a more relaxed form, only something conceptual in nature can stand in a rational (read: inferential[9]) relation to a belief, and so only something conceptual can count as a (justificatory) reason for said belief. As sensations are not conceptual in nature, it seems then that they can have no rational bearing on thought. Thus, by rejecting the Given, we make it impossible to see how our theories could be rationally constrained by the world, and indeed, impossible to see how our thought could even have any content. We might appeal to sensations in explaining why we have the beliefs we have, in the way that one might appeal to a person's quick temper and contempt for his fellow humans in explaining why he committed a murder. But in neither case is the explanation *justificatory*; it is at most "exculpatory," as McDowell puts it.

So, McDowell argues, we find ourselves oscillating between two equally unappealing poles:

> It can seem that if we reject the Given, we merely reopen ourselves to the threat to which the idea of the Given is a response, the threat that our picture does not accommodate any external constraint on our activity in empirical thought and judgment. . . . We come under pressure to recoil back into the Given, only to see all over again that it cannot help. There is a danger of falling into an interminable oscillation.[10]

The way out of this oscillation, according to McDowell, is to recognize that (contra Sellars) perception is already conceptual in nature.[11] If sensation is conceptual, then it can stand in a rational, justificatory relationship to the beliefs concomitant on sensation, and the problem is solved.

At least two comments are appropriate at this point. First, McDowell is careful to point out that his solution is not a version of the myth of the Given.[12] As McDowell recognizes, "The idea of the Given is the idea that the space of reasons, the space of justifications or warrants, extends more widely than the conceptual sphere."[13] That is, the idea of the Given is the idea that something non-conceptual could provide a reason or justification for a belief. McDowell is not saying that the space of reasons extends further than the space of concepts; he is rather stating that the realm of concepts extends beyond the realm of belief and into the realm of sensation (and indeed, all the way into the world, as we shall see).

The second comment is this: it is not clear that Sellars's attack on the Given has any bearing on McDowell's claim that sensation is conceptual in nature. Although space does not permit me to do much to justify this reading of Sellars, Sellars's primary argument against the Given is that a sensation *by itself* cannot be conceptual in nature. Let me explain. Sellars's inferentialism claims (roughly) that a sentence's meaning is constituted by the material inferential proprieties governing the use of that sentence.[14] Now, these material inferential proprieties are defeasible *evidential* relations (such as, "It is raining" defeasibly entails "The streets are wet"; the former is *evidence* for the latter.) We see, then, that for Sellars, the epistemic and the conceptual are intimately tied: understanding the content of a sentence consists in mastery of these epistemic/evidential relations (e.g., the material-inferential proprieties that govern the use of the sentence). The crucial point to be gleaned from this is that an item is therefore conceptual only when it is epistemically significant.

However, a sensation is not *by itself* epistemically significant. At the very least, if one does not understand the difference between standard and non-standard viewing conditions, then one cannot tell the difference between something's *being* green and it's merely *looking* green. So, at the very least, this sensation of green is not epistemically relevant until one has mastered standard and non-standard viewing conditions. As Sellars recognizes, "One couldn't have observational knowledge of *any* fact unless one knew many *other* things as well."[15] Ergo, a sensation cannot by itself have any epistemic significance, and is hence non-conceptual (i.e., without conceptual content).

Here is where McDowell can insert a wedge into Sellars's account of sensations: to say that sensations are not *by themselves* epistemically significant does not entail that they are *never* epistemically significant. The possibility remains that when one acquires the necessary battery of conceptual resources (McDowell's "second nature"), one's sensations become conceptual in nature.[16] Consider an analogy: in the absence of other beliefs, one's belief that

there is a regular succession of day and night is not evidence for anything else.[17] It is only in the context of one's auxiliary commitments that this belief becomes evidence for anything. (Indeed, it is only in the presence of one's auxiliary commitments that it could even count as a belief in the first place.) Similarly, McDowell can claim that it is only in the context of a large range of concepts and commitments that a given sensation has epistemic import (and hence conceptual content).

Of course, in acquiring conceptual content, the sensation is not altered in any of its intrinsic characteristics. What changes is that in *virtue of the acquired conceptual abilities of the person experiencing this sensation*, the sensation now has epistemic import; it can now be appealed to as evidence for various claims about the world. Regarding the point I am making here, it might be helpful to reflect on Sellars's analogous claim that "in characterizing an episode or a state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what one says."[18] To say that a sensation is conceptual is not to say that it has some magical property, or that there is something intrinsic to the sensation that makes it differ from non-conceptual sensations (say, those of an animal). It is merely to say that the sensation appears in a context of acquired conceptual capacities and commitments (again, McDowell's "second nature"), and in virtue of this context the sensation can count as having epistemic import for the empirical theory held by the person experiencing this sensation. I will have a great deal more to say about this way of identifying the conceptual later on, as I think understanding this point is crucial to seeing our way through the puzzle that McDowell has set for us.

Let us pause for a moment and take stock of a source of our worries about rational constraint by perception. One way of resolving a dilemma is to escape between the horns, to find an overlooked third way, or "*via media*," as Sellars is wont to put it.[19] Another way is to attack one of the horns of the dilemma. I think the first horn of our dilemma is insurmountable; Sellars's attack on the Given is entirely cogent. But what of the other horn? The second horn denies that the purely causal can have any rational bearing on the conceptual; it commits us to "frictionless spinning in the void." According to McDowell, the basic problem recognized by Sellars (and Davidson) is that "the logical space of reasons is *sui generis*, as compared with the logical space in which Sellars sees 'empirical description' as functioning, which I have identified on Sellars's behalf with the logical space of nature."[20] Causal relations are causal relations, and rational relations are rational relations, and never the twain shall meet. McDowell attempts to reconcile the logical space of nature and the logical space of reasons by making the latter less *sui generis* compared with the former, by partially assimilating world to mind and claiming that the world is itself conceptual. Thus, McDowell writes, "Once we remember second nature, we see

that operations of nature can include circumstances whose descriptions place them in the logical space of reasons, *sui generis* though that logical space is"[21]; and "reality is . . . not to be pictured as outside an outer boundary that encloses the conceptual sphere."[22] Thus, one can attack the second horn of our dilemma by assimilating world and mind. McDowell, as I have already noted, seems to do this by assimilating world to mind (although he does not, it should be emphasized, embrace idealism, which would be a total assimilation of world to mind).

Now, McDowell would perhaps be uncomfortable with my suggestion that he wishes to make the logical space of reasons less *sui generis* with respect to the logical space of nature. After all, McDowell seems to equate such an assimilation with bald naturalism.[23] But in fact, this is what he seems committed to doing; he is making the world more like the mind, so that the latter can represent the former. We can demonstrate that he is committed to doing this: the basic problem, as McDowell sees it, is that if sensation, what is given in receptivity, is non-conceptual, then it cannot rationally constrain judgment (in the technical, Kantian sense of the faculty of judgment which is set off against the faculty of receptivity). But notice that the causal chain leading from objects to our empirical judgments includes not just sensation and judgment; it includes also the objects themselves, and (in cases of visual perception, at least) a pattern of photons traveling through space. The question that arises at this point is this: if the idea of conceptual judgmental capacities at work on non-conceptual sensations is not helpful in explaining rational constraint by how the world is, then how is the idea of conceptual powers of sensation working on non-conceptual patterns of photons any improvement? If the problem is that the logical space of reasons is *sui generis* compared to the logical space of nature, then the problem is not resolved by moving the boundary between these two spaces from point A (between judgment and receptivity) to point B (between receptivity and patterns of photons). No, if McDowell wants to pursue his strategy for explaining how our theories can have empirical content, he must claim not only that perception is conceptual, but also that the patterns of photons emitted by objects, and indeed the objects themselves, are conceptual, are in the logical space of reasons. McDowell embraces this conclusion:

> According to the Myth of the Given, the obligation to be responsibly alive to the dictates of reason lapses when we come to the ultimate points of contact between thinking and reality; the Given is a brute effect of the world, not something justified by it. But in fact the obligation must be in force all the way out to reality. The world itself must exert a rational constraint on our thinking. If we suppose that rational answerability lapses at some outermost point of the space of reasons, short of the world itself, our picture ceases to depict anything recognizable as empirical judgment; we have obliterated empirical content altogether.[24]

Thus, world is assimilated to mind: reality is in the space of reasons. Mind is able to represent world because world, like mind, turns out to be conceptual: reality is itself conceptual. Thus, when Sellars writes that "sensations are no more epistemic in character than are trees or tables,"[25] he is (on McDowell's story) wrong on every count: sensations are *just as epistemic* as trees or tables.

What is it to say that trees and tables are conceptual? This sounds like some strange version of idealism. McDowell's view does not need to be equated with idealism, but we are nevertheless in a position now to see that McDowell is himself caught on the horns of a dilemma. On the one horn, he can follow a plausible line about conceptual content, the line I outlined above. Recall that on this view, conceptualness is a relational, rather than an intrinsic, property. Thus, an item is conceptual in virtue of its being caught up in a web of appropriatenesses. To say that an item, such as a sensation, is conceptual is not to say that it has some magical property, or that there is something intrinsic to the sensation that makes it differ from non-conceptual sensations (say, those of an animal). It is merely to say that the sensation appears in a context of acquired conceptual capacities and commitments (again, McDowell's "second nature"), and in virtue of this context the sensation can count as having epistemic import for the empirical theory held by the person experiencing this sensation.

But if this is what McDowell wants to say, then McDowell's view is not in any better position regarding rational constraint by perception than are the views at which he aims his criticism. For if we think that conceptual content is an extrinsic, relational property (as I have said), it seems clear then that what is determining the conceptual content of the item (e.g, sensation) in question is not something intrinsic to that item, but rather the relations in which the item stands to other items (say, beliefs, skills, etc.). And so the possibility remains that if these relations were different, then the conceptual significance of the item in question would also be different. But then the question must be asked: how do we know if we have the right system of relations—that is, how do we know we have the right theory of the world? The sensation in question cannot tell us what conceptual content it ought to have—that is, it cannot tell us what relations it ought to stand in to our beliefs, perceptual skills, etc. After all, McDowell correctly points out that the Myth of the Given is "the idea that the space of reasons, the space of justifications or warrants, extends more widely than the conceptual sphere."[26] And so an item, such as a sensation, cannot tell us what its conceptual nature ought to be, because *it can only tell us anything once it is already conceptual in nature*. Thus, we are thrown right back into McDowell's dilemma: sensations may be conceptual in nature, but the world cannot tell us which conceptual system is the correct one; objects cannot dictate the concepts we use to cognize these objects. If we had a different set of perceptual concepts (see, for example, Paul Churchland's mythical society of people who perceive not in terms of

the concepts *hot* and *cold*, but in terms of *high* and *low caloric pressure*[27]), then our sensations would have different conceptual import. But we can now feel ourselves starting to spin frictionlessly; the world cannot grip us and tell us which conceptual system to use.

No doubt, McDowell would object to my transcendental language, my talk of a division between an unconceptualized world and a (phenomenal?) world imbued with concepts. He would no doubt object to my injecting into *his own* account a question of how the former could constrain the latter; for part of his attack on Sellars and Davidson consists of denying this dualism, denying that there is a non-conceptual world.[28] But the question remains acute, even if we reject the transcendental standpoint: which world ought we live in? Should we live in the world of hot and cold, or the world of high and low caloric pressure?

If the conceptual content of sensation is determined by the theory we hold, then the world isn't really imposing on us in the way McDowell wants it to. There is still too much slippage, because we still have to ask whether we have the correct theory, and there is nothing extra-theoretical that can tell us which theory to choose. Our inputs in the world have conceptual shape, but they have the shape they have in virtue of the theory we hold, on this relational account of conceptual content. So if McDowell wants to embrace this relational account of conceptual content, then it seems that McDowell's account is not appreciably better than the Davidsonian account he attacks.

Of course, it is open to McDowell to claim that possessing conceptual content is an intrinsic property, and not a relational property. A sensation is conceptual not in terms of relations it bears to other items, but in virtue of some intrinsic feature. But this is the other horn of the dilemma, because this account is clearly unsatisfactory. First, this position does damage to the idea of conceptual holism. Second, it may run afoul of Sellars's attack on the Given. As I argued earlier, an important conclusion of Sellars's "Empiricism and the Philosophy of Mind" is that a sensation cannot by itself have conceptual content. But this conclusion is denied by the claim that possession of conceptual content is an intrinsic property of various items. Finally, in light of McDowell's claim that the world is itself conceptual, this seems to amount to a "magical properties" view of the conceptual. What does it mean to say that trees are *intrinsically* conceptual? Is this a physical property? Is conceptuality *in* the trees, much as physicists once thought caloric was *in* hot items? No, this will clearly not do as an account of the conceptual.

So McDowell's dilemma is this: if he endorses a relational account of conceptual content, then he is no better off than Sellars and Davidson in explaining how the world is supposed to constrain our empirical theory. If, on the other hand/horn, he endorses a non-relational account of conceptual content, then he runs into the three problems I briefly outlined above (the denial of conceptual holism; a run-in with Sellars's argument against the givenness of sensations; and a "magical properties" or "caloric" view of conceptuality).

Thus, McDowell's assimilation of world to mind does not seem to offer a solution to the frictionless spinning/myth of the Given dilemma he hoped to solve. Is there another option? Those uncomfortable with McDowell's "quasi-enchantment" of the world can be forgiven if they wish that he had explained rational constraint by perception without claiming that the very world itself is conceptual. One might have hoped we could see our way through to making room in the world for the normative without resorting to "quasi-enchantment" of the world or to bald naturalism. Sellars seems to suggest this option in "Philosophy and the Scientific Image of Man."[29] There, Sellars distinguishes between the manifest image (the framework of persons, norms, qualia, and so on) and the scientific image (the framework of microparticles, forces, and so on). Sellars concludes this essay by writing:

> [T]he conceptual framework of persons is not something that needs to be *reconciled with* the scientific image, but rather something to be *joined* to it. Thus, to complete the scientific image we need to enrich it *not* with more ways of saying what is the case, but with the language of community and individual intentions, so that by construing the actions we intend to do and the circumstance in which we intend to do them in scientific terms, we *directly* relate the world as conceived by scientific theory to our purposes, and make it *our* world and no longer an alien appendage to the world in which we do our living. (p. 40)

It is important to note that Sellars suggests we enrich the scientific image with the manifest image and not vice versa; this suggests that Sellars wants to make room for norms in the world, rather than making room for the world within the realm of the normative. But can this be accomplished without resorting to bald naturalism? Sellars certainly seemed to think so, as he is hardly a bald naturalist. But is he correct? I think he is, and I think that this accommodation of mind within world can be accomplished without resorting to crude sorts of naturalism. We will see how Wilfrid Sellars provides the tools to solve the dilemma McDowell sets before us, and how, borrowing from Sellars and certain neo-Sellarsians, we can solve the problem of rational constraint by perception without resorting to a McDowellian quasi-enchantment of the world. We will also see that Sellars's solution succeeds in large part because it possesses elements that make this solution neither coherentist nor foundationalist. So, let us assemble all of the elements of a Sellarsian solution, and at the end of the paper we will combine these elements into a story about rational constraint by perception.

II. MAKING ROOM IN THE WORLD FOR MIND

Building on the work of Heidegger, Merleau-Ponty, Hubert and Stuart Dreyfus, and others, John Haugeland criticizes views that countenance "a principled distinction between the mental and the corporeal—a distinction that is

reflected in contrasts like semantics versus syntax, the space of reasons versus the space of causes, or the intentional versus the physical vocabulary."[30] Haugeland argues instead for "the *intimacy* of the mind's embodiment and embeddedness in the world."[31] He continues: "The term 'intimacy' is meant to suggest more than just necessary interrelation or interdependence but a kind of *commingling* or *integralness* of mind, body, and world—that is, to undermine their very distinctness."[32] Thus, there is not a sharp distinction (physical or conceptual) between mind and world; they are intermingled.

While summarizing Haugeland's argument would require too much space, some examples might be helpful in understanding this point. Phenomenologically, at least, skillful practitioners of various practices often feel themselves integrated into the world; the expert experiences him- or herself as part of the environment. As Hubert and Stuart Dreyfus write,

> The expert driver becomes one with his car, and he experiences himself simply as driving, rather than as driving a car, just as, at other times, he certainly experiences himself as walking and not, as a small child might, as consciously and deliberately propelling his body forward. Airplane pilots report that as beginners they felt that they were flying their planes but as experienced pilots they simply experience flying itself.[33]

But the point is not just phenomenological: the point is ontological, too. Skillful coping systems are actually part of the environment. To see how this is so, let us consider Mark Tilden, a researcher at Los Alamos laboratory. Using only simple motors, transistors, and other off-the-shelf components, Tilden builds machines that can

> crawl, slither or tumble around in complex natural environments, and solve problems and survive any number of conditions that their designer never taught them about. For example, a solar-powered walking robot, turned loose in a field behind the lab, gets through the grass and ditches, the stones taller than itself, and the weeds snagging its antennae, without any programming from Tilden.[34]

Tilden's robots are capable of navigating a complex, unplanned environment and extricating themselves from difficulties—even of adapting to damage inflicted upon their bodies or circuitry. And they are amazingly simple—Walkman, one of Tilden's early robots, contains only 5 motors and 12 transistors, yet is capable of walking and coping with unstructured environments. How can such a simple machine engage in such complex behavior? It is because the machine is in fact not so simple: the machine *incorporates* its environment, which is highly complex. As Tilden says, "The world completes the robot's architecture. Without the world, it wouldn't do anything very interesting."[35] Tilden extends this point to humans: "[A]ll our psychology, psychiatry, artificial intelligence, many studies of consciousness, are based on the concept that we are rational animals. No! We are a solid core of pure chaos bounded by linear systems keeping us regulated toward some level of

cohesiveness with the world. We are chaotic creatures *who are made rational by our environment*."[36]

So the first step in seeing our way through the problem of rational constraint is by integrating the mind into the causal order.[37] Let us see how this is supposed to work.

III. TIED BEHAVIOR

The first step in integrating mind into the causal order involves recognizing the importance of what Sellars calls "tied behavior." In explaining our ability to acquire and apply concepts such as *red*, we must consider this process as occurring not in judgment, but as a purely causal process of associating certain words ("red," "blue," etc.) with the deliverances of a pre-existing ability to respond differentially to objects in the environment. To quote Sellars, "we learn habits of response to our environment in a way which is essentially identical with that in which the dog learns to sit up when I snap my fingers. . . . Thus, as children we learn to understand the noise 'blue' in much the way as the dog learns to understand the noise 'bone.' "[38] Let us begin by pointing out certain benefits that accrue to such a position. One place Kant's philosophy runs aground is in Kant's failure to integrate mind into the causal order. In Kant's familiar picture, causation is part of the empirical order, not part of noumenal reality. But it is plausible to see Kant's guidedness problem as arising out of this failure. Briefly, the guidedness problem is this: Kant argues that more complex concepts are built up out of simpler concepts, and so forth. But the problem is, where do the initial, simplest concepts come from? There seem to be two possible answers. The first possibility is that these basic concepts are innate. But then the problem of rational constraint by the world becomes particularly acute: for our empirical theory to represent the world, the world must be responsible not just for our employment of concepts, but also for the concepts themselves.[39]

The other possibility is to argue that these basic concepts are abstracted from experience. But abstractionist theories of concept formation are, in Sellars's phrase, just "another episode in the Myth of the Given." To *notice*, say, a similarity between different red items is to already be able to group red items together. If we consider this process to occur in judgment, then we are presupposing that judgment already possesses the concept of red, or some ur-concept of redness. Noticing something red *as* red is essentially a conceptual ability, and conceptual abilities are acquired. Let me state the problem this way: remember that for Kant, concepts are rules, and so judging is essentially a matter of following rules. Therefore, if abstracting concepts from experience were something that occurred in judgment, then acquiring the concept of, say, red would essentially amount to following a rule which presupposed that we could already judge which items were red, since recognizing when

the antecedent of the rule is satisfied would require that one could already judge that certain items were red.

Thus, in explaining our ability to acquire concepts such as red, we must consider this process as occurring not in judgment, but as a purely causal process of associating certain words ("red," "blue," etc.) with the deliverances of a pre-existing ability to respond differentially to objects in the environment. Recall that, as Sellars puts it, "we learn habits of response to our environment in a way which is essentially identical with that in which the dog learns to sit up when I snap my fingers. . . . Thus, as children we learn to understand the noise 'blue' in much the way as the dog learns to understand the noise 'bone.'"[40] Of course, this can't be all there is to the acquisition of concepts; to suppose that the ability to respond to red objects with a token of the word "red" is to suppose that parrots, thermometers, and ferrous metals all possess concepts, since they are all capable of reliable differential responses to elements in their environment. We will see in a moment what else must be true if this causally-elicited response is to count as the employment of a concept. The point to notice for now is that perception is, in the first instance, a physical, causal process: a physical object (say, a red pencil) *causes* in us a *physical* state (a brain state).

It will be noted that in the last paragraph I have made a move from talking about the *acquisition* of observational concepts to talk about the *employment* or *application* of observational concepts. This is because similar comments apply to both. If the acquisition of an observation concept cannot be a matter of following a rule, nor can the application of such a concept be the following of a rule, and for exactly the same reason: to construe either process as a matter of rule-following is to create a regress of rules. The idea that the application of observational concepts involves the following of a rule was roundly criticized by (of course) Sellars:

> Now it is obvious that acquiring the concept of red cannot be equated with coming to *obey* a semantical rule. To put the same point in more elementary terms, the application of the concept *red* to an object in the process of *observing* that something is red, cannot be construed as *obeying* a semantical rule, for a rule is always a rule for doing something in some circumstances, and *obeying* a rule presupposes the recognition that the circumstances are of a kind to which the rule applies. If there were a semantical rule by learning to *obey* which we could come to have the concept of red, it would presumably be of the form *Red objects are to be called "red"*—a rule to which we could clearly give linguistic expression only *ex post facto*. But, to recognize the circumstances to which the rule applies, one must already have the concept of red—not to mention all the other concepts constitutive of the rule. One would have to have the concept of red before having it, and to apply it before one could apply it.[41]

It should be clear that this criticism of a rule-following account of concept application is in essence identical to the above criticism of rule-following accounts of concept acquisition. In both cases, we must understand the process in question as a process *that does not occur in judgment*, but as a purely causal process of differential response, which involves a pre-existing ability to respond differentially to features of the environment (an ability no different from that possessed by a thermometer or a parrot) with linguistic items, items we are *trained* to employ in response to objective features of the world much as a dog is *trained* to follow commands.

No doubt the reader is afraid that we are here skirting an abyss, at the bottom of which lies a naturalism of the most foolish and naïve variety. And so we would be, if the above account of perception purported to be the whole story about concept-use. But I have only told part of the story—the part of the story about *tied behavior*, the stimulus-response behavior that ties us to our environment and which is no different from the stimulus-response behavior displayed by a trained parrot. Although the part about tied behavior is only part of the story, it is an important part. This part of the story illustrates the naturalness of mind, the embeddedness of mind in the causal order, and the integratedness of mind into the world. We will also see that this part of the story is necessary in understanding how our concepts are empirical, by showing how our concepts are tied to the world.

As I just indicated, "tied behavior" is Sellars's term for the stimulus-response behavior we have been discussing, as (for example) when one responds to a blue object by producing the word "blue." What differentiates the tied behavior of a person from that of a mere animal? A few of Sellars's comments are suggestive. Let us look at these comments, and then unpack their contents carefully. Doing so will accomplish two goals: first, it will show us how the elements of a superior account of perception are contained in Sellars's writings, and so McDowell did not need to advance beyond his Sellarsian roots. Second, it will enable us to identify specific flaws in McDowell's own account.

IV. SELLARS AND PERCEPTION

What makes a bit of tied behavior count as an empirical judgment, as opposed to a merely reliable (but not sapient) differential response to the environment? In the Kantian tradition in which Sellars is working, the answer must have something to do with *rules*. Kant writes, "Only a rational being has the power to act according to his conception of laws, i.e., according to principles, and thereby has a will."[42] It is in this vein that Sellars writes,

> To say that man is a rational animal, is to say that man is a creature not of *habits*, but of *rules*. When God created Adam, he whispered in his ear, "In all contexts of action you will recognize rules, if only the rule

to grope for rules to recognize. When you cease to recognize rules, you will walk on four feet."[43]

But what relation to a rule must a behavior display to count as intelligent, sapient? It is clear that the behavior must do more than merely *conform* to a rule. Parrots, thermometers, and atoms *conform* to rules, but we do not think them thereby intelligent. Nor is it necessary that an intelligent being always explicitly *obeys* or *follows* a rule (i.e., intelligent behavior need not be rule-obeying or rule-following behavior). Wittgenstein has demonstrated that intelligent behavior cannot be explained in terms of rule-following; and as we saw above, Sellars has pointed out that applying an observation predicate cannot be the following of a rule, since this would presuppose a prior rule for recognizing that the antecedent of the rule being followed is satisfied.

Sellars attempts to find a *via media* between rule-obeying and merely rule-conforming behavior. Sellars argues that there is a third option, what he calls *pattern-governed* behavior. To illustrate this *via media*, Sellars used the analogy of biological evolution:

> In interpreting the phenomena of evolution, it is quite proper to say that the sequence of species living in the various environments on the earth's surface took the form it did because this sequence maintained and improved a biological *rapport* between species and environment. It is quite clear, however, that saying this does not commit us to the idea that some mind or other envisaged this biological *rapport* and intended its realization. It is equally clear that to deny that the steps in the process were intended to maintain and improve a biological *rapport* is not to commit oneself to the rejection of the idea that these steps occurred because of the system of biological relations which they made possible. It would be improper to say that the steps "just happened" to fit into a broad scheme of continuous adaptation to the environment.

Thus, evolution is an example of a process that is neither rule-following nor merely rule-conforming. One important thing to notice about evolutionary processes is that they are *processes*, i.e., they are temporally extended. We will see that accounting for human intelligence and our ability to represent the world will involve this diachronic aspect, and that the evolutionary analogy is apt indeed, for something like evolutionary pressure is going to play a key role in Sellars's account.

But let's not get ahead of ourselves. Sellars makes another important comment on this in his essay, "Language, Rules and Behavior":

> [A]bove the foundation of man's learned responses to environmental stimuli—let us call this his *tied behavior*—there towers a superstructure of more or less developed systems of rule-regulated symbol activity which constitutes man's intellectual vision. . . . Such symbol activity may well be characterized as *free*—by which, of course, I do not mean *uncaused*—in contrast to the behavior that is learned as a dog learns to

sit up, or a white rat to run a maze. On the other hand, a structure of rule-regulated symbol activity, which as such is free, constitutes man's understanding of *this* world, the world in which he lives, its history and future, the laws according to which it operates, by meshing in with his tied behavior, his learned habits of response to his environment.[44]

There are two crucial elements in this comment. The first is the idea of the superstructure of inferential activity "towering over" the tied behavior. The second element is the Kantian notion that this superstructure is the realm of freedom (with the un-Kantian point about causation). Let us look at these two elements one at a time.

1. SUPERSTRUCTURE

As John Haugeland has written, "Intelligence is the ability to deal reliably with more than the present and the manifest,"[45] but also with that which is "absent and covert." Sellars explains this feature of intelligence in the following way: as we saw above, Sellars distinguishes between tied behavior and the superstructure of "rule-regulated symbol activity." Sellars writes that the tied behavior and the superstructure mesh with each other in that "certain intra-organic events . . . function as symbols in both senses, as both free and tied symbols."[46] Here is Sellars:

> I have already argued above that the hook-up between rule-regulated symbol activity and the external environment rests on the *meshing* of rule-regulated symbol activity with what I referred to as "tied behavior." Now though this tied behavior is not *rule-regulated* symbol behavior, it is nevertheless customary to refer to certain forms it may take as "symbol behavior." Let us distinguish this symbol behavior by the phrase "tied symbol behavior." Thus we can say that picking up his dish is a tied symbol of food to a dog. Now, what misleads these regulists who speak of the sense meaning rules of a language is the fact that in order for the above mentioned meshing of rule-regulated language with tied symbol behavior to take place, *certain intra-organic events must function as symbols in both senses, as both free and tied symbols*. Thus, as children we learn to understand the noise "blue" in much the same way as the dog learns to understand the noise "bone," but we leave the dog behind in that the noise "blue" also comes to function for us in a system of rule-regulated symbol activity, and it is a *word*, a linguistic fact, a rule-regulated symbol only in so far as it functions in this linguistic system. The noise "blue" becomes a mediating link between what can suggestively be called a rule-regulated calculus, and a cluster of conditioned responses which binds us to our environment.[47]

It is in virtue of our tied behavior that words such as "blue" signify *empirical* concepts, and hence in virtue of such behavior that our theories are about the world. (I am claiming here only that the existence of such tied behavior

constitutes a necessary condition on our concepts being empirical; it would be absurd to assert that the existence of such behavior constitutes a sufficient condition. However, one goal of this paper is to mine Sellars's writings for a set of jointly sufficient conditions; this will emerge as one of these conditions.) However, the existence of *non-tied* symbol behavior allows us to think about blue objects in the absence of any objects that instantiate the concept *blue*. Thus, the tied symbol behavior helps make the concept *blue* empirical; the non-tied symbol behavior allows us to display intelligence by thinking about absent or covert objects, and is part of what allows the tied symbol behavior to count as tied *symbol* behavior, as differentiated from, say, the *merely* environmentally tied behavior displayed by a piece of iron rusting in the presence of water. Thus, Sellars's comment about the meshing of the two types of symbol behavior is important in explaining how we *represent* the world.

So the first function of the superstructure is to allow thought about absent objects. The second important idea we wanted to discuss is the Kantian idea of the conceptual realm as the realm of freedom. Let us briefly turn our attention to this important element of Sellars's thought.

2. FREEDOM

To suppose that our concept use is not caused behavior is to abandon naturalism, abandon empiricism (since our concept acquisition and use cannot then be constrained by the empirical world), and (as we saw) to rush headlong into Kant's guidedness problem. But the idea of the realm of concepts as the realm of freedom is an important idea to the Kantian tradition within which Sellars is working. How do we reconcile these two ideas?

We reconcile them by recognizing that the freedom that characterizes the realm of the conceptual is not freedom in the libertarian, unmoved-mover sense. Rather, the freedom of the conceptual is the freedom to think, desire, and do things one could not think, desire, or do without possessing concepts. Simply put, being constrained by conceptual norms enables one to do things that one could not do if one were not so constrained. This idea is best expressed by Robert Brandom, in his Hegelian updating of the Kantian notion of the conceptual as the free:

> When one has mastered the social practices comprising the use of a language sufficiently, one becomes able to do something one could not do before, to produce and comprehend novel utterances. One becomes capable not only of framing new descriptions of situations and making an indefinite number of novel claims about the world, but also becomes capable of forming new intentions, and hence of performing an indefinite number of novel *actions*, directed at ends one could not have without the expressive capacity of the language. This is a kind of positive freedom, freedom *to* do something rather than freedom *from* some constraint. For it is not as if the beliefs, desires, and intentions one comes

to be able to express when one acquires a suitable language have been there all the time, hidden somehow "inside" the individual and kept from overt expression by some kind of constraint. Without a suitable language there are some beliefs, desires, and intentions that one simply cannot have. Thus we cannot attribute to a dog or a prelinguistic child the desire to prove a certain conjectured theorem, the belief that our international monetary system needs reform, or the intention to surpass Blake as a poet of the imagination. . . . [I]t is only in virtue of being constrained by the norms inherent in social practices that one can acquire the freedom of expression which the capacity to produce and understand novel utterances exhibits.[48]

Thus, we see that the realm of the conceptual is the realm of freedom. But it is crucial to note the sense in which this realm is free. It is not free in the sense of uncaused—if we insisted on such freedom for the conceptual realm, then it would be impossible to integrate the conceptual into the natural.

There is a second sense in which our use of concepts is free. This is the sense in which our concepts, and the theoretical commitments made possible by our possession of these concepts (building here on Brandom's above idea) are revisable. That is, our language use is free because we are not stuck with a frozen, unrevisable linguistic system.[49] Sellars expresses the importance of revision in the following well-known passage:

Above all, the [traditional picture of knowledge] is misleading because of its static character. One seems forced to choose between the picture of an elephant which rests on a tortoise (What supports the tortoise?) and the picture of a great Hegelian serpent of knowledge with its tail in its mouth (Where does it begin?). Neither will do. For empirical knowledge, like its sophisticated extension, science, is rational, not because it has a *foundation* but because it is a self-correcting enterprise which can put *any* claim in jeopardy, though not *all* at once.[50]

Two elements we have discussed (the idea of the superstructure and the revision of our conceptual system over time) come together in Sellars's picture. It turns out that the diachronic, evolutionary element is connected in an important way to the notion of the superstructure: the superstructure must contain elements that allow this evolution to occur. Let us turn to a discussion of this crucial element in the Sellarsian picture.

V. THE DIACHRONIC STRUCTURE OF EMPIRICAL CONTENT

Epistemologists are beginning to recognize the importance of conservatism in belief-systems.[51] That is to say, epistemologists are beginning to recognize that many elements of a given belief-system are *prima facie* justified in virtue of so belonging. Thus, the burden of proof is not on the belief-holder, but on anyone who wishes to challenge or revise this belief. This view in

epistemology has a number of sources. It is not important for my purposes to list these sources; rather, I wish to emphasize the degree to which this view forces us to admit also that justification is diachronic in nature. Let us examine how this is so.

We begin by asking, how can a belief be justified merely in virtue of belonging to a belief system? Does this mean that any arbitrary belief is *prima facie* justified, so long as it is in fact believed? This would seem an odd picture of justification. However, we can tell a story that makes sense of how a belief can attain such *prima facie* justification, even if the agent holding the belief cannot provide an inferential justification for this belief. For our belief-system is the result of a centuries-long process of refinement and revision in response to input from the world. Thus, so-called basic beliefs are *prima facie* justified not merely in virtue of belonging to our system of beliefs; rather, they are *prima facie* justified because this system—and in particular these basic beliefs—are the product of centuries of epistemic evolution. Thus, one way of solving the puzzle of conservatism is by recognizing that justification is diachronic in nature—that is, by recognizing that (in Sellars's words) "empirical knowledge . . . is rational, not because it has a *foundation* but because it is a self-correcting enterprise which can put *any* claim in jeopardy, though not *all* at once."[52]

Thus, if a system of belief is to be justified, this system of beliefs must be self-correcting; it must be subject to revision in light of evidence that such revision is called for. And indeed, it seems clear that for a system of beliefs to be *empirical*, it has to be *revisable*. For how can a theory be empirical—answerable to the world—if it is not subject to revision in response to input from the world? Diachronic revisability helps explain what makes theories empirical.

1. SUPERSTRUCTURE, DIACHRONIC STRUCTURE, AND RULE CONFORMITY

I have just argued that our theories must be subject to revision over time to count as empirical. There is, however, a more fundamental sense in which empirical content must be diachronically structured in order to count as empirical content. Remember, we are trying to find a *via media* between rule-obeying and merely rule-conforming behavior. Thermometers and parrots display rule-conforming behavior; what is it that makes the activity of humans more than mere rule-conforming behavior? As we have seen, the answer cannot be that human behavior is rule-following behavior. This "solution" would create an infinite regress of rules, among other problems. However, working within the Kantian-Sellarsian tradition, we want to explain the norm-governedness of human behavior in terms of rules. The goal, then, is to find some tie "stronger than mere accord, but weaker than following, between Jones's linguistic behavior and the rules definitive"[53] of the concepts Jones employs.

For Sellars, the critical moment in the behavioral history of the species is the point at which we acquired the ability to use a symbol to represent that symbol's role.[54] Sellars uses "dot quotes" to help him symbolize a symbol's role. So •red• is the role played by the word "red" in the language; and hence "rot," "rouge," and "red" are all •red•s—they are all words playing the same role as "red" does in the English language. When the species arrives at this point, we can discuss and debate these roles, and what Sellars calls the "game of giving and asking for reasons" is able to get underway.

The neo-Sellarsian philosopher Mark Lance provides a promising account of this *via media*, built on Sellars's comment about evolution and his idea of debating words' roles in the game of giving and asking for reasons. Lance begins by pointing out that there are a number of ways of constraining a person's use of a word. One can use chemical or surgical intervention; or one can issue a command. But the most interesting way of constraining someone's use of a word "is to assert and justify a meaning claim."[55] A meaning claim is an utterance that takes place at the meta-level. Now there is an important connection between this metalanguage and the linguistic practice it governs: a successfully-justified meaning claim places a normative constraint on use of the object-language, that is, on behavior at the level of the linguistic practice governed by the metalanguage. Thus, if I successfully defend the claim, "Personhood is not tied to race,"[56] then you are normatively constrained to refrain from making moves in the object language such as the move from "*S* is non-white" to "*S* is not a person."

We can see the notion of a superstructure re-entering the picture. We have already seen one sense in which there is a superstructure towering above our system of tied behavior: there is non-tied symbol behavior, use of symbols ("blue," "extended," etc.) that does not involve perception. This non-tied behavior, as we saw, was a mark of intelligence in that it allowed us to represent objects that were absent—it allowed us to speak and think of objects even at times when those objects were not objects of immediate perception (i.e., even when those objects were not *at that moment* involved in an instance of tied behavior). However, there is a second important type of superstructure—there is the metalinguistic structure, a structure that allows us to argue over the norms that ought to govern our linguistic practice, including the tied and non-tied behavior.

This second type of superstructure, this metalanguage, is what allows us to sketch the *via media* between rule-following and merely rule-conforming behavior. In the metalanguage, we criticize people's use of words, and can thereby alter their use of particular terms. We do so by participating in what Sellars called the "game of giving and asking for reasons," by making and justifying meaning and theoretical claims—claims that place normative constraints on people's use of words in the object language. Over time, people's use of words comes to conform with the rules constitutive of this word's meaning and proper

theoretical role in the language.[57] For example, people are now less inclined to use the term "momentum" to mean "the force equal to mass times velocity"; people are less inclined to think "marriage" entails, as a matter of meaning, "occurred in a church," people are less inclined to claim that the sun orbits the earth, and so forth. Lance writes,

> [B]ehavior tends to come into accord with rules, and . . . in some systematic, broadly evolutionary way, its doing so is explained by the fact of that conformity. . . . We are now in a position to make more concrete the mechanism of rule governedness, for it is precisely the [game of giving and asking for reasons] that plays the role in conceptual evolution of reproductive competition in natural selection. What is it that tends to inhibit uses not in accord with a rule? It is criticism by others of that behavior as violating norms of meaning.[58]

Again, I would add that we correct behavior as violating not just norms of meaning, but theoretical norms as well. In any case, this practice of criticism over time causes people's behavior to conform to the rules that are definitive of a word's meaning and proper theoretical role. And so the relation between people's use of a word and the rules definitive of the use of that word is *stronger* than mere conformity to these rules, but *weaker* than rule-following.[59]

Notice that this picture of the *via media* between merely rule-conforming behavior and rule-following behavior is essentially diachronic. It relies on the notion of evolutionary pressures (in the form of criticisms of people's use of words) over time forcing people's use of terms into conformity with the rules definitive of those words' meaning and proper theoretical role. For behavior to count as norm-governed, this behavior must be part of an on-going practice of giving and asking for reasons, of revision in response to successfully justified metalinguistic claims.

To return to our discussion from the previous section, we can now see more clearly the second sense in which our conceptual system is free. To count as concept-users in the first place, we must be able to move to a metalanguage in which our language use can be justified, criticized, and revised. Thus, the realm of the conceptual is free not only in the Brandomian sense described above, but also in the sense that we are not stuck with the conceptual system we begin with. A conceptual system is essentially revisable, in that if a system of behaviors lacks such a revisionary mechanism, it cannot count as a conceptual system in the first place; the *via media* outlined here between rule-conforming and rule-following behavior requires that this mechanism exist. And, as I argued above, a system must be revisable if it is to count as empirical, since it is hard to see how a system that was not revisable in light of new evidence from the world could count as answerable to the world (and hence empirical). So a system must be revisable to count as *conceptual*, and it must be revisable to count as *empirical*. This revisability, again, is another sense in which the conceptual realm is free.

All of the tools are now in place for us to answer the central question of this paper: how does perception rationally constrain our empirical theories? Let us now use these tools to assemble our final, Sellarsian theory.

VI. THE SELLARSIAN SOLUTION

Aid and comfort are to be sought in the Sellarsian account of concept acquisition and application I have outlined in this paper. This account explains how the world is *responsible* for our concepts—it explains how concepts are given (not Given) to us by the world. Allow me to explain.

The basis for these concepts is provided by the purely causal interaction of the world on our sensory mechanisms and of our antecedently held ability to respond differentially to different stimuli. Causal interaction with the world establishes what might be called "protoconcepts"—a system of differential causal responses—responses (in the form of beliefs) to environmental stimuli, and responses (in the form of actions or further beliefs) to our own mental states. Now to call this system of differential responses a system of protoconcepts is not to say that the system or its elements are conceptual—for they are not, at least not yet. It is merely to say that this system of differential responses will become conceptual, once it attains a sufficient degree of complexity, assuming this complexity is of the right kind (about which more in a moment).

Let us, however, linger on this first step for a moment. The first step in being rationally constrained by the world is having a mind that is causally integrated with the world. Because our brain and sensory apparatus are causal systems, and because they give reliable differential responses to features of the world, the world is capable of giving itself to our minds—giving not in the capital "G" sense of "Given," the sense implying that these causal inputs from the world are by themselves epistemically or conceptually significant—but given in the sense that our brain and sensory apparatus, as a reliable differentially-responding system, is latching on to genuine features of the world and producing responses that systematically covary with features of the world.[60] The world gives us these protoconcepts in the sense that their being caused in us, and the reliable covariance of our caused responses and the features in the world that generate these responses, are brute causal facts; the world generates these responses in us, and this is not something that is free, or that occurs in judgment. Thus, a one-year-old, normally developing child (or even an animal), while not possessing the concepts "extension," "gravity," and "solidity," is nevertheless capable of navigating the world in a way that indicates a protoconceptual awareness of solidity, gravity, and discrete objects that can be manipulated (although animals are not capable of moving beyond this protoconceptual stage into the realm of genuine concepts).

To move to the next step, we must ask: how does this system of protoconcepts become genuinely conceptual? And how do these causal inputs from the world

come to count as rational, and not merely causal, constraints? As I indicated earlier, this system becomes conceptual when it acquires the correct degree and kind of complexity. What kind of complexity are we talking about?

The answer to this should be fairly clear by now. First, the system must contain the resources for critiquing these merely causal responses. Now, I indicated above the importance of conservatism in epistemology.[61] This conservatism manifests itself in a number of ways. One way in which it manifests itself is that certain beliefs belonging to a belief-system are *prima facie* justified in virtue of so belonging. Thus, the burden of proof is not on the belief-holder, but on anyone who wishes to challenge or revise this belief. Another way in which this conservatism manifests itself is that certain sources of belief carry *prima facie* justificatory force, force that is not derived from any sort of inductive inference about the reliability of such sources. Again, the burden of proof is on anyone who wishes to challenge the reliability of this source, not on the person who wishes to rely on this source. One such source is testimony: we are *prima facie* justified in believing the testimony of others, and this justification does not rest on any inductive generalization about the honesty and reliability of the testimony of others.[62] Another source is sense perception: once we have the right sort of perceptual skills (dispositions to differentiate between standard and non-standard viewing conditions, etc.), the deliverances of sense-perception are *prima facie* justified. The deliverances of sense-perception can be relied upon because our sensory mechanisms are reliable differentially-responding causal mechanisms, mechanisms whose deliverances reliably covary with the features of the world responsible for these deliverances. (Of course, I am committed to saying that the above is merely an explanation of why sense-perception is reliable; it cannot count as a justification of sense-perception. Indeed, while I am here giving an account of how perception rationally constrains belief, this account *presupposes* that sensation is a reliable differential mechanism. I do not see how one could give a non-circular argument for perception's *reliability*.) However, as we saw while discussing Mark Lance's account of the connection between rules and conceptual content, treating a bit of behavior as conceptual "requires that we posit an as yet unneeded, but potentially available extra level of practice within which we could criticize" the behavior in question. Thus, while the deliverances of sense-perception are under normal circumstances justified, a critical element in these deliverances counting as beliefs, as having conceptual content, is the availability in principle of a meta-level at which we could lodge challenges to the truth of particular sensory beliefs. That sensory beliefs are *prima facie* justified entails that the burden of proof is on the challenger, but the point is that the language must have the resources (i.e., a metalanguage) to allow such challenges if it is to count as a language in the first place.

And of course, the metalanguage will allow for the evolution of our system of beliefs, because the metalanguage makes possible the revision of our

system of beliefs. Perhaps there are certain causal inputs to the system of beliefs that we are not disposed to classify; or perhaps we disagree on how to classify them. Perhaps our system of beliefs predicts a certain causal input, and a different input is encountered instead. Thus, our system of beliefs (including perceptual beliefs) is revised on the familiar grounds of coherence, consistency, explanatory adequacy, predictive success, and so forth.

With the advent of the metalanguage, the causal responses generated in us by the world become subject to norms of correctness. If someone (say, a child) responds with the judgment "Green thing!" when the rest of us are disposed to respond with the judgment "Red thing!" we correct the child. We are able to do this because the metalanguage makes possible judgments of the form, "That child's response is incorrect." The existence of the metalanguage, the judgments of correctness it allows, and the evolutionary processes generated by these judgments, are, of course, necessary in making the behavior in question count as conceptual behavior, as norm-governed behavior, in the first place; these elements are necessary in describing the correct relation between human behavior and rules: behavior evolves toward the rules constituting terms' meaning and theoretical role, and in a broad sense this happens *because* these rules are the correct ones.

At the end of the day, there is nothing mysterious about how perception rationally constrains belief. We start off with a sensory mechanism, the deliverances of which systematically covary with the features of the world generating these deliverances. This protoconceptual system of deliverances and differential responses is made conceptual by the presence of the metalanguage and the related evolutionary progress of the system of differential responses. The states caused by sense perception[63] are justified because sensation is a reliable differential mechanism, responding to genuine features of the world; and because these responses can be critiqued, in the metalanguage, according to the familiar criteria of coherence, consistency, and so forth.

In the end, mind and world are not so different. There are causal connections—between features of the world and our brains—that count as rational relations because of the reliable covariance of the features of the world and the responses generated in our brain, and because of the evolutionary processes engendered by our metalinguistic practice of giving and asking for reasons. There is nothing magical about these causal responses; it is likely that the mechanisms of sensation are similar, perhaps even identical, between humans and non-human higher animals. But the states caused by *our* sensory mechanisms count as *beliefs* (as conceptual) because of the relation they stand in to rules.

VII. CONCLUSION

We have assembled a number of elements for the Sellarsian solution: (1) an integration of mind into the causal order, which is exemplified by (2) tied

behavior, whereby we have responses that systematically covary with features of our environment; (3) conceptual freedom (in the Brandomian sense); (4) a superstructure or metalanguage which gives us (5) the ability to use a symbol to represent that symbol's role, and (6) the ability to revise our empirical theories by engaging in the game of giving and asking for reasons (which turns out to be a second type of freedom—we are not simply stuck with our conceptual system as it is). 4–6 allow for (7) evolutionary pressures which allow us to stake out (8) the proper connection between language and rules, the *via media* between rule-conforming and rule-following behavior—our use of a word comes gradually to conform to the rules constitutive of the word's proper semantic and theoretical role. Once we assemble these elements, we can see how tied behavior can come to be characterized as conceptual behavior, and how the states resulting from the world's causal inputs can come to be characterized as *belief* states, rationally answerable to—and constrained by—the world.

McDowell is correct about an important point: a causal input cannot by itself be epistemically significant. The world cannot by itself tell us how it is. Our cooperation is required: only in the context of an inferential superstructure containing a metalanguage of normative propriety can these causal inputs acquire epistemic significance.

In "Empiricism and the Philosophy of Mind," Sellars denies that his theory is foundationalist or coherentist. And indeed, it is not: Sellars's comment about science being a self-correcting enterprise is important. We are trained into a theory of the world, a theory we must initially just dogmatically accept. Once we are trained into the theory, we can then go on to revise the theory in light of considerations such as coherence. But coherence comes into the picture only second; the practice, and our allegiance to the *prima facie* correctness of the practice, is first. Nor is Sellars's theory foundationalist: by rejecting the idea that a causal input can in and of itself be epistemically significant, by claiming that an intra-organic event can only count as an empirical observation in the context of a critical metalanguage contained in an inferential superstructure, Sellars is denying that there are anything like stand-alone, intrinsically justified beliefs. And so Sellars steers a middle course between the Given of foundationalism, and the anti-empiricism of coherentism.

ENDNOTES

1. John McDowell, *Mind and World* (Cambridge, Mass.: Harvard University Press, 1996).

2. This is McDowell's own expression (ibid., 9).

3. Actually, it is not clear that a denial that the world rationally constrains our beliefs entails that our beliefs are not about the world. But nothing important hangs on this; I wish to examine how, precisely, the world rationally constrains our beliefs. The reader

may also follow McDowell in construing such an argument as an argument that our be-liefs are empirical. I am grateful to a referee for the *Journal of Philosophical Research* for pointing this out.

4. Wilfrid Sellars, *Empiricism and the Philosophy of Mind* (Cambridge, Mass.: Harvard University Press, 1997).

5. Most commentators focus on Sellars's attack on sense-data, but Sellars is equally concerned to explain privileged access, inner sense, our grasp of linguistic meaning, and more, without appeal to any sort of Given.

6. Sellars, "Some Reflections on Language Games," *Science, Perception, and Reality* (Atascadero, Calif.: Ridgeview Publishing, 1991), 321–358, 335–336.

7. Sellars infers from this that what we perceive must therefore not be sensations, but rather objects in the world.

8. Donald Davidson, "A Coherence Theory of Truth and Knowledge," in *Truth and Interpretation: Perspectives on the Philosophy of Donald Davidson*, ed. E. Lepore (Oxford: Basil Blackwell, 1986), 307–319, 310.

9. Sellars, like Brandom after him, seems to equate the realm of the rational with the realm of the inferential. It is not clear that this belief is justified, and a critical examination of this presupposition might be fruitful and illuminating, perhaps solving a number of problems in epistemology. Mark Lance points out this assumption in "The Word Made Flesh: Toward a Neo-Sellarsian View of Concepts, Analysis, and Understanding," *Acta Analytica* 15:25, 117–135. See 119, n. 3.

10. McDowell, *Mind and World*, 8–9.

11. See for example p. xx, where McDowell rejects the thesis that "the idea of receiving an impression must be foreign to the logical space in which concepts such as that of answerability function." Also, "we must insist that the understanding is already inextricably implicated in the deliverances of sensibility themselves" (*Mind and World*, 46), and "Having things appear to one a certain way is already itself a mode of actual operation of conceptual capacities. This mode of operation of conceptual capacities is special because, on the side of the subject, it is passive, a reflection of sensibility." *Mind and World*, 62.

12. At least one reader has claimed that McDowell's position is a version of the Myth of the Given. I will not pursue this claim, as nothing hangs on it; if McDowell's position really is a version of the Myth, then that provides an additional reason for rejecting the position, as I intend to do.

13. McDowell, *Mind and World*, 7.

14. See "Inference and Meaning," *Mind* 62 (1953): 313–338. Reprinted in *Pure Pragmatics and Possible Worlds: The Early Essays of Wilfrid Sellars*, ed. J. F. Sicha (Atascadero, Calif.: Ridgeview Publishing, 1980), 261–286. All citations will be from the latter source. As Brandom points out [*Articulating Reasons: An Introduction to Inferentialism* (Cambridge, Mass.: Harvard University Press, 2000)], Sellars implies that the smallest unit of meaning is not the individual word, but the individual sentence (since sentences are the smallest unit that can stand in an inferential relation). However, Brandom continues, Sellars did little to account for the contribution sub-sentential bits make to the meaning of a sentence. Rectifying this shortcoming is one of Brandom's undertakings in *Making It*

Explicit: Reasoning, Representing, and Discursive Commitment (Cambridge, Mass.: Harvard University Press, 1994).

15. Sellars, *Empiricism and the Philosophy of Mind*, 75, (section 36).

16. This is one thing that McDowell might mean when he claims that experience is conceptual. As I will point out later, there is another way this claim might be spelled out; but either way, his view runs into trouble.

17. I borrow this example from chapter three of Helen E. Longino, *Science as Social Knowledge: Values and Objectivity in Scientific Inquiry* (Princeton, N.J.: Princeton University Press, 1990).

18. Sellars, *Empiricism and the Philosophy of Mind*, 76 (section 36).

19. Sellars's philosophical project is in large part characterized by an attempt to find such a "*via media* . . . between rationalistic a priorism and . . . descriptivism" ("Language, Rules, and Behavior," 129) or psychologism, as he sometimes calls it. "Language, Rules, and Behavior," in *John Dewey: Philosopher of Science and Freedom*, ed. S. Hook (Dial Press, 1950), 289–315. Reprinted in Sellars, *Pure Pragmatics and Possible Worlds*, 129–155. All citations will be from the latter source.

20. McDowell, *Mind and World*, xviii.

21. Ibid., xx.

22. Ibid., 26.

23. McDowell (ibid., 67) equates "denying that the spontaneity of the understanding is *sui generis*" with bald naturalism.

24. Ibid., 42–43.

25. Sellars, "Some Reflections on Language Games," 336.

26. McDowell, *Mind and World*, 7.

27. Churchland, *Scientific Realism and the Plasticity of Mind* (Cambridge, Mass.: Cambridge University Press, 1979), chap. 1.

28. Hence, McDowell's comments at the end of Lecture II. Particularly, in section 9 of that lecture, McDowell counsels us to abandon Kant's transcendental perspective, with its distinction between sensible and supersensible reality, and embrace a picture "in which reality is not located outside a boundary that encloses the conceptual sphere." *Mind and World*, 41.

29. "Philosophy and the Scientific Image of Man," in *Frontiers of Science and Philosophy*, ed. R. Colodny (Pittsburgh, Pa.: University of Pittsburgh Press, 1962). Reprinted in Sellars, *Science, Perception, and Reality*, 1–40. All citations will be from the latter source.

30. "Mind Embodied and Embedded," in John Haugeland, *Having Thought: Essays in the Metaphysics of Mind* (Cambridge, Mass.: Harvard University Press, 1998), 207–237, 208.

31. Ibid.

32. Ibid.

33. Hubert and Stuart Dreyfus with Tom Athanasiou, *Mind Over Machine: The Power of Human Intuition and Expertise in the Era of the Computer* (New York: The Free Press, 1986), 30.

34. Paul Trachtman, "Redefining Robots," *Smithsonian Magazine* 30 (February 2000), 96.

35. Ibid.

36. Ibid., emphasis added.

37. We will see as we go how this might be done without resorting to "bald naturalism."

38. Sellars, "Language, Rules, and Behavior," 137, 142.

39. Of course, one might argue that these innate concepts are the result of evolutionary pressures on the development of the human brain; and perhaps, in telling this story, one could tell a story about how these concepts are *caused* by the world in a way that makes them sufficiently *answerable* to the world to count as *representing* the world. Ignoring the question of whether such an account can be made to work, again notice that this account requires causal integration of the mind into the world, something Kant denied. So again, Kant's failure to integrate mind into the causal order closes a possible avenue of escape for the orthodox Kantian.

40. Sellars, "Language, Rules, and Behavior."

41. Sellars, "Some Reflections on Language Games," 333–334.

42. Immanuel Kant, *Grounding for the Metaphysics of Morals*, Ak. 412. Reprinted in Immanuel Kant, *Ethical Philosophy*, trans. J. W. Ellington (Indianapolis: Hackett Publishing, 1983), 1–69, 23.

43. Sellars, "Language, Rules, and Behavior," 138.

44. Ibid., 137–139.

45. Haugeland, "Mind Embodied and Embedded," 230.

46. Sellars, "Language, Rules, and Behavior," 141–142, emphasis removed from original.

47. Ibid.

48. Robert Brandom, "Freedom and Constraint By Norms," *American Philosophical Quarterly* 16 (1979): 187–196, 194.

49. This seems to be McDowell's understanding of the sense in which the realm of the conceptual is the realm of freedom. McDowell (*Mind and World*, xxiii) indicates that one good way of understanding freedom is as "responsiveness to reasons." Interestingly, McDowell also cites with approval Brandom's article, "Freedom and Constraint by Norms" (see McDowell, *Mind and World*, 5, n. 5).

50. Sellars, *Empiricism and the Philosophy of Mind*, 78–9 (section 38).

51. For an argument that conservatism is both important and a genuinely epistemic (as opposed to a merely pragmatic) concept, see my "Conservatism, Contextualism, and the Diachronic Nature of Epistemic Justification" (manuscript).

52. Ibid., 79 (section 38).

53. Lance, "The Word Made Flesh," 120.

54. I am grateful to Keith Lehrer for a helpful conversation on this topic.

55. Lance, "The Word Made Flesh," 25.

56. Lance (ibid., 130) uses this as an example of a meaning claim one might defend.

57. Lance talks primarily about meaning claims and the rules constitutive of a word's meaning. Since "Two Dogmas of Empiricism," it is not obvious that there is a principled distinction between meaning claims and theoretical claims, but I will understand the game of giving and asking for reasons as involving the assertion and justification of both meaning claims and theoretical claims.

58. Lance, "The Word Made Flesh," 121, 126.

59. We can never be certain as to which rules ought to govern the use of a term, i.e., which rules constitute a concept and its theoretical role in the language. Because we are fallible, we must always acknowledge the possibility of future revision of our linguistic practice. Sellars himself talks as though concepts would resolve into patterns of behavior, capturable by rules, if we were somehow (per impossible) to become infallible and ideally rational. Lance would no doubt deny this, claiming instead that a word's role in the language cannot be completely captured by a set of rules; he claims, though, "to say that a concept use is rule regulated use need not be to say that this use is completely specifiable in terms of rules" (ibid., 119). In any case, both Lance and Sellars can be seen as giving a characterization of the rules toward which our conceptual system is evolving.

60. The language of systematic covariance is used by Robert Brandom in "Perception and Rational Constraint," *Philosophy and Phenomenological Research* 58 (1998): 369–374; and "Perception and Rational Constraint: McDowell's 'Mind and World,'" in *Perception*, ed. E. Villanueva (Atascadero, Calif.: Ridgeview Publishing, 1996).

61. Again, I argue for the importance of conservatism in my manuscript "Conservatism, Contextualism, and the Diachronic Nature of Epistemic Justification."

62. For an argument establishing this conclusion, see Mark Owen Webb, "Why I Know About as Much as You: A Reply to Hardwig," *The Journal of Philosophy* 90 (1993): 260–270.

63. We should distinguish (as does Sellars) between a sensation and the belief state that is caused by the sensation. The former are not caught up in the space of reasons: they are not revisable or answerable to critique. (What would it mean to revise one's sensations?) Only the latter are—they are revisable and answerable to criticism, and so only they can count as beliefs.