

# Prospects for a Stereoscopic Vision of our Thinking Nature: On Sellars, Brandom, and Millikan<sup>\*</sup>

James R. O'Shea<sup>†</sup>  
jim.oshea@ucd.ie

## ABSTRACT

In this article I consider how the very different but equally Sellars-inspired views of Robert Brandom and Ruth Millikan serve to highlight both the deep difficulties and the prospects for a solution to what is arguably the most central problem raised by Sellars's attempted "stereoscopic fusion" of the "manifest" and "scientific images": namely, the question of the nature and place of *norm-governed conceptual thinking* within the natural world. I distinguish two "stereoscopic tasks": (1) the possibility of integrating a naturalistic theory of animal representation *within* an irreducibly normative inferentialist account of conceptual content; and (2) the possibility of providing a naturalistic explanation *of* the normative "space of reasons" and conceptual thinking as such. Millikan embraces and Brandom resists the naturalistic representationalist hypotheses involved in (1); while Brandom embraces and Millikan resists the conception of pragmatically irreducible normativity involved in (2). The grounds of resistance in each case are arguably suspect.

## Introduction

Sellars's 1962 article, *Philosophy and the Scientific Image of Man* (PSIM) is widely recognized as a classic presentation of the profound problems that confront any attempt to account for the nature of the human being – as a

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<sup>†</sup> University College Dublin.

consciously experiencing, conceptually thinking, and rationally active being – within the bounds of ontological sense that have seemed to Sellars and many other philosophical naturalists to follow from modern scientific conceptions of nature. In that article Sellars succeeded in developing the problems in more detail than he did his own envisaged solutions to those problems, but taking his works as a whole he did attempt to sketch solutions to each of the problems he raises. (See O’Shea 2007, 2009, and 2011 for my own take on Sellars’s overall synoptic vision of persons as sensing, thinking, and acting beings within a scientific naturalist ontology.) In what follows I propose to consider how the views of two well-known systematic philosophers whose views are strongly influenced by those of Sellars – Robert Brandom and Ruth Millikan – can be seen as highlighting both the deep difficulties and the prospects for a solution to what is arguably the most central synoptic problem raised by Sellars: the question of the nature and place of *norm-governed conceptual thinking* within the natural world.

It is of course a matter of vigorous contemporary dispute whether meaning and intentionality are constitutively normative phenomena. Here, however, I propose to examine certain synoptic issues that arise on the assumption of the correctness of the *normativity thesis*, as we might call it. These issues cluster around the familiar but important topic of the consequences of the normativity thesis for naturalism. Sellars, as is well known, defended strikingly comprehensive versions of both the normativity thesis on the one hand, and a thoroughgoing scientific naturalism on the other. Perhaps most controversial by current lights are the particular ways in which Sellars argued for what he conceived of as a *stereoscopic fusion* of (in effect) the normativity thesis and scientific naturalism, by analogy with how, as he put it, «two differing perspectives on a landscape are fused into one coherent experience» (PSIM, p. 4). What exactly is such a stereoscopic vision of our specifically *conceptual* capacities supposed to look like, on Sellars’s view? And what are its prospects in light of more recent developments?

I should note from the outset that “naturalism” on the approach I shall take here, though fully comprehensive, will for present purposes not be taken (*contra* Sellars) to entail any ostensible conflict with the manifest image ontology of ordinary persisting and coloured *physical objects*, such as trees and tables, but only with the manifest ontology of *persons and norms*, which for Sellars presents an importantly different set of problems. The aspects of Sellars’s naturalism that I shall discuss here are very widely shared in

contemporary philosophy and do not involve any particularly controversial conclusions concerning the ultimate *falsity* of the manifest image ontology of physical objects (cf. EPM, p. 173) – but this is naturalism enough to generate the familiar controversies pertaining to the normativity of meaning and conceptual content that I shall be discussing here.

Ruth Millikan has recently provided a particularly helpful entryway to the issues I want to focus on, in her essay, *The Son and the Daughter: On Sellars, Brandom, and Millikan* (2005). In this essay Millikan recounts how, in her own work, she has «pursued the picturing themes from the *Tractatus* that were carried through in Sellars’s discussions of that causal-order relation between language and the world that he called “representing”»; by contrast, she continues, «Brandom has followed Sellars’s interest in the language-games metaphor from *Philosophical Investigations*, expressed in Sellars as a form of inferential role semantics and in the thesis that one learns to think only as one learns to abide by the rules of a language» (Millikan, 2005, p. 77; cf. Brandom 1994). In this essay, however, Millikan ultimately contends that there was what she calls “a crack” in Sellars’s system that accounts for how it is that both she and Brandom remained faithful to central aspects of Sellars’s views while nonetheless radically diverging in their own respective views.

Perhaps surprisingly – although from my perspective, plausibly – Millikan contends that there was no “crack” or inconsistency, *per se*, in the way that Sellars attempted to combine seemingly incompatible central themes from both the early and the later Wittgenstein. There need not be any blatant crack here provided that certain systematic distinctions of level and of aims are recognized. Here is how Millikan briefly describes what she sees as Sellars’s in principle coherent attempt to (as I shall put it) stereoscopically combine certain broadly *Tractarian* and certain later-Wittgensteinian themes within one unified, multileveled account of human cognition:

Indeed, Sellars went to great pains to explain exactly how inferential role semantics was consistent with ‘*Tractarian*’ picturing. The idea was, roughly, that in an individual’s or a community’s following the rules of a language, the language being largely internalized as thought, a very abstract map of the world was in the process of construction. [Here Millikan quotes Sellars’s 1962 article, “Truth and ‘Correspondence’” (in Sellars, 1963, p. 215) on the «fantastically complex system of rules of projection» that are involved in naturalistic picturing or representation.] These fantastic complexities are introduced mainly by the inference rules [...] that govern ‘statement-

statement' (hence judgment–judgment) transitions. [...] The map of the world produced by a language is not found sentence by sentence but only in the whole of the living *language cum thought* running isomorphically to the whole world in sketch. If there is a crack in the Sellarsian foundation, this is not where it lies, or anyway not precisely. (Millikan, 2005, p. 78)

The topic of this passage provides the first stereoscopic task that I will consider here: roughly, the attempt by Sellars to embed a substantive naturalistic account of mental representation – a conception applauded and extended by Millikan – *within* the sort of normative-inferentialist “space of reasons” account of conceptual thinking defended by both Sellars and Brandom, despite the arguably unnecessary resistance to such naturalistic representationalist accounts by Brandom and other neo-Sellarsian philosophers such as John McDowell. In section II, I shall then briefly consider a second, more problematic stereoscopic task, one likewise championed by Millikan: that of attempting to give a naturalistic account *of* the normatively rule-governed space of reasons and conceptual thinking itself. It is in relation to this task that Millikan will contend that where «there may be a crack» is «in Sellars’s treatment of the nature of linguistic rules and the relation of these to conceptual roles and thus to intentionality» (Millikan, 2005, p. 78).

## I

The first stereoscopic task, then, is that of showing how (as highlighted in Millikan’s passage above) the normative dimensions of human conceptual cognition are not only consistent with, but in fact stand in intelligible systematic interrelations with an underlying naturalistic dimension of “language/world” or “mind/world” representational relations.

Both Brandom and McDowell in their differing but highly productive ways have defended the Sellarsian view that properly conceptual representation is possible only within a wider *logical space of reasons* (cf. EPM p. 169). Only within such a normative «ambience of rules of criticism», to use another phrase from Sellars (1968, p. 175), are conceptual thinking and rationally responsible judgment possible. From these deeply Sellarsian perspectives it can seem philosophically disastrous to traffic, as Sellars himself did, in any notions of mental and linguistic representation, at the level of properly human cognition, that cannot be reconstructed in terms of the complex interplay of normative standings within a conceptually structured space of reasons. But I

am not convinced that we ought to reject, in principle, Sellars's interesting attempt to stereoscopically combine his broadly inferentialist account of meaning and conceptual thinking – at least in certain basic empirical domains – with an underlying naturalistic theory of mapping-and-tracking “picturing” or *representational systems*, as he eventually called them in his late (1981) article, *Mental Events*. Let's look a little more deeply into this issue.

In *Mental Events*, after giving a crash course in the first three parts on both his «functionalist theory of meaning and intentionality» (1981, §37) and his Tractarian nominalist theory of predication and picturing-representation, Sellars in the final three parts proceeds to offer an explanation of «what linguistic and non-linguistic representational systems have in common» (1981, §50). In the following passages Sellars lays out some central aspects of his basic conception:

§56. Indeed, I propose to argue that to be a representational state, a state of an organism must be the manifestation of a system of dispositions and propensities by virtue of which the organism constructs *maps* of itself in its environment, and locates itself and its behavior on the map.

§57. Such representational systems (RS) or cognitive map-makers, can be brought about by natural selection and transmitted genetically, as in the case of bees. Undoubtedly a primitive RS is also an innate endowment of human beings. The concept of innate abilities to be aware *of something as something*, and hence of pre-linguistic awarenesses is perfectly intelligible.

§72. [...] (h) Putting it crudely, the fundamental thesis I have been advancing is that while prelinguistic RSs do not have ‘subjects’ and ‘predicates’ they do share with subject-predicate RS the duality of the functions of *referring* and *characterizing*. The fact that in a subject-predicate language these functions involve separate *subject* symbols and *predicate* symbols is, from this standpoint superficial.

(i) All of the above is compatible with the idea that the presence in a RS of subjects and predicates makes possible degrees of sophistication [for example, negation and quantification –J.O’S.] which would otherwise be impossible. But to develop this point would require a discussion of logic-using representational systems.

(And Sellars then does go on to discuss the explicitly *logical* representational resources that he argues distinguish such «logic-using representational systems» from other animal representational systems.)

One question that immediately arises for anyone who is at all familiar with Sellars's views is how the view expressed in the final sentence of §57 above is supposed to be consistent with Sellars's claim in *Empiricism and the Philosophy of Mind* (EPM) that «all awareness of *sorts* [...] is a linguistic affair» (EPM, p. 160), which was a key component of his famous argument against the “myth of the given”. This ostensible inconsistency, however, is part and parcel of the particular stereoscopic task that we are now to explore. My aim in this section is to examine whether such a naturalistic theory of representation as Sellars attempted to sketch in *Mental Events* and elsewhere – with whatever explanatory payoffs it might be thought to have – is coherently available and recommendable to Sellarsian inferentialists of Brandom's stripe, for instance.

One of the key elements in Sellars's account in *Mental Events* and elsewhere (e.g., Sellars, 1963, chs. 6 and 11), it seems, is the role of natural selection in generating the required systematic pattern of normal functioning – a natural biological *selection space*, as I shall call it, as opposed to a *logical space* of reasons – within which particular events or behaviors can be coherently understood as instances of correct or incorrect functioning. Teleosemantic theories such as Millikan's have subsequently attempted to account for the norms of proper functioning in terms of which an animal representational system can be coherently conceived to *misrepresent* various aspects of its environment, thus providing some actual cash for Sellars's schematic gestures toward natural selection in these contexts. Could one in principle embrace the heart of Millikan's teleosemantic conception of animal representational systems while departing from Millikan in maintaining, as Sellars does, a sharp, pragmatically irreducible distinction between logical space normativity and natural selection space normativity?

Consider Sellars's own account of human perceptual cognition; for example, as expressed in the sensorily passive, object-elicited “language entry transition” or non-inferential judgment that there is a red cube on the table. On the one hand Sellars holds that such perceivings require not only differentially receptive sensory capacities, but also the possession and spontaneous exercise of acquired conceptual capacities (involving the capacity to apply the concepts *red* and *cube*, for instance). On the other hand, in parts IV and V of *Empiricism and the Philosophy of Mind*, Sellars had already made clear that we can and should push further in our explanatory ambitions – even while remaining within the “manifest image”, and even without being drawn

into the “homogeneity” problem or “grain argument” that Sellars puts forward concerning sensory qualia (although that problem was admittedly crucial for Sellars himself: cf. PSIM, sections V–VI). In the course of EPM part IV, entitled *Explaining Looks* (note the “explaining”, rather than “analyzing” the concept of “looks”, which occurred in part III, *The Logic of “Looks”*), Sellars remarks as follows concerning what will ultimately amount to his own explanatory posit of “sense impressions” as inner adverbial states of sensing:

Now there are those who would say that the question ‘Is the fact that an object looks red and triangular to S to be explained [...] in terms of the idea that S has an impression of a red triangle?’ simply doesn’t arise, on the ground that there are perfectly sound explanations of qualitative and existential lookings which make no reference to ‘immediate experiences’ or other dubious entities. Thus, it is pointed out, it is perfectly proper to answer the question ‘Why does this object look red?’ by saying ‘Because it is an orange object looked at in such and such circumstances’. The explanation is, in principle, a good one, and is typical of the answers we make to such questions in everyday life. But because these explanations are good, it by no means follows that explanations of other kinds might not be equally good, and, perhaps, more searching. (EPM, p. 150)

As he remarked in a similar spirit in *Science and Metaphysics* a decade later: «Philosophy may perhaps be the chaste muse of clarity, but it is also the mother of hypotheses» (1968, p. 12). Sellars there states as follows the most general form of the more searching explanatory aim that is embodied in his theory of what he explicitly calls «non-conceptual representations» (1968, pp. 16–17, & *passim*):

If what might be called the ‘sense impression inference’ is an inference to an explanation, what specifically is it designed to explain? [...]

If we construe physical objects, for the moment, in Strawsonian [that is, in manifest image] terms we can say that the aim is to explain the correlation of the conceptual representations in question with those features of the objects of perception which, on occasion, both make them true and are responsible for bringing them about. (Sellars, 1968, p. 17)

Sellars’s overall explanation, I think, goes roughly like this. The perception that there is a red cube on the table involves, inter alia, both the conceptual and the nonconceptual representation of a red cube. Most philosophers at this stage are broadly familiar with either Sellars’s or Brandom’s normative inferentialist account of what gives the concepts “red” and “cube” their *conceptual* content. Sellars’s further hypothesis, I suggest, is that this

perceptual cognition *also* involves underlying mapping and tracking representational relations of two different kinds: one is of a linguistic kind which, qua representation, is parasitic on its having been generated within a wider logical space of reasons; and the other is of a biological kind which, qua representation, is parasitic on its having been generated within a wider space of natural selection. Sellars's picture, to be explored in what follows, thus has the following components:

*Three* representational dimensions in Sellars's account of human perceptual cognition:

(1) *Conceptual content*, reference, etc., as accounted for in terms of an inferential space of reasons. Plus 2 kinds of underlying naturalistic representation:

(2a) "*Space of reasons parasitic*" *linguistic* representations (*qua* "natural linguistic objects"); and

(2b) "*Selection space parasitic*" *nonconceptual* representations (e.g., the "sensation of a red cube").

Consider first the "space of reasons parasitic" form of underlying representational relation (i.e., (2a)). To put it very crudely, I have been trained within a normative space of reasons to be disposed to token "red" in response to red objects and "cube" in response to cubical objects in such a way that my current inner or outer tokening of a •this red cube• kind or manner of representing *ought-to-be* causally "correlated" (as we saw Sellars put it oversimply above) with red cubical objects in my nearby environment – other things being equal, of course, and subject to all the very serious objections and qualifications that such causal-covariation accounts of perceptual representation must address. But at least *some* of the standard objections to such theories would be mollified by the fact that Sellars's is a very unusual causal representationalist account, precisely because the relevant causal patterns are in this case established and maintained not directly by nature but indirectly via the normative pragmatic ought-to-be rules (as Sellars calls them, cf. 1968, *passim*) of a logical space of reasons. Those thinkers who are subject to these ought-to-be norms will normally have no such underlying causal representational level or goals directly in view at the normative-pragmatic level (of the "life-world", as it were). But neither should we theorists be so chaste as to suffer from a philosophically imposed ban on whatever explanatory grounds



there may be for the theoretical investigation of such “language game parasitic” cognitive mapping relations. This integrationist or stereoscopic view of our logico-conceptual and natural-nonconceptual representational capacities is a “mother of hypotheses” that is worth further exploration. In particular, an embrace of the Sellarsian space of reasons and the normativity thesis ought not to lead us (as many neo-Sellarsian philosophers have suggested that it should) to avert our eyes from Sellars’s own delicately placed naturalistic representationalist hypothesis of this kind.

As to the second, “selection space parasitic” form of representational system (i.e., (2b)), Sellars’s proposal was that our ostensible perception that there is a red cube on the table will also normally incorporate – given the way that we are in part built *by nature* as well as by culture – a nonconceptual *sensory* representation or “sense impression” of a red cube. The theorist models the content of this “of-a-red-cube” manner of sensing on aspects of its typical outer physical cause (again, with the usual theoretical burdens that spelling out such a view entails).

This hypothesis is without detriment to the fact that we rational beings must also *conceptually* represent the presence of the red cube, as a functionally (normative-inferentially) constrained element within the very same cognitive response, *if* we are to perceptually recognize the cube in the way that situates us *as knowers* within a logical space of reason-giving. This of course points the way toward resolving the supposed inconsistency between Sellars’s views in EPM and in *Mental Events* mentioned earlier: namely, concerning our awareness of “sorts” as somehow both necessarily linguistic and yet also, in some cases and in some respects, innately biological and non-linguistic. Note also that on this view, as Sellars continually stressed throughout his works, the “of” of nonconceptual sensory representation is not the same as the “of” of conceptually contentful intentionality. Nonetheless the former non-conceptual representations, too, are genuinely *representational contents* that can correctly or incorrectly represent the presence of their corresponding objects on any given occasion. The point is that nonconceptual sensory representations, like all representations for Sellars, are “of” their corresponding objects – whether veridically or non-veridically – only in virtue of their place within a wider pattern-governed system or “ambience of norms”. In this case the relevant norms derive from a selection space of nature rather than a logical space of reasons – although in human cognition the one has become systematically integrated with the other.

But perhaps this happy stereoscopic picture puts things too neatly. Bob Brandom's recent Sellars MA Seminar in 2009 at Pittsburgh<sup>1</sup> rightly raises the question of whether Sellars in *Mental Events* really did intend to offer at all the sort of *ur*-Millikan account of biological "selection space normativity" for which I have suggested he was explicitly making coherent philosophical room (at the appropriate level). It is true that "below the line" of conceptual representation proper (to borrow a useful metaphor from McDowell, 2009, chapters 1–3) Sellars discusses animal representational systems primarily in terms of Humean-style associative uniformities and propensities. Brandom in his seminar suggests that by itself this would support only a non-normative *causal functionalist* account of animal cognition, not the more promising account of biological *proper functioning* that Millikan went on to develop in order to fill the sort of crack she finds in Sellars's account. I think it is at least clear, however, that Sellars in the article argued for a distinction between *correct* and *incorrect* "below the line" animal representations that is possible only as a result of such behavior or events being embedded within wider systematic patterns of behavior and cognition, some of which are innate due to a history of natural selection and some of which are learned through associative mechanisms. Sellars was proposing that the systematicity that is required in order to generate the constitutive normative correctness involved in any representational state in general, is at this most basic biological level to be explained by patterns of functioning that have resulted from a history of natural selection. Millikan then takes that vague idea and provides a more comprehensive theory, one that also seeks to explain how various learned associative patterns in animal cognition should be viewed as *derived proper biological functions* based ultimately on naturally selected mechanisms. This is stereoscopic progress in line with the account of Sellars's philosophy that I have been giving, both in general meta-philosophical respects (as a mother of naturalistic hypotheses as well as a chaste muse of conceptual clarity), and in relation to the specific issue of the normativity of non-conceptual representations *qua representations*. Millikan then attempts to push this model all the way up "above the line" into the space of reasons, and here matters do threaten to jar with both Sellars's and Brandom's accounts, as I shall briefly discuss below in relation to the second stereoscopic task.

<sup>1</sup> Kindly made publicly available on his website: <http://www.pitt.edu/~brandom/phil-2245/>.

But Brandom in the seminar also raises a further potential problem with the picture Sellars presents in *Mental Events*. Brandom suggests that something like his own normative pragmatic account of *assertion* (cf. Brandom, 1994, ch. 3) is needed in order to fill a serious gap that he finds in Sellars's remarks on how his complex *nominalist theory of predication* is supposed to support his naturalistic theory of basic representational relations (cf. (2a) above). But in this case I suspect that a specific misconstrual or running together of distinct levels and aims might be involved in this objection, and that no worry of *this* kind need chasten the attempt to stereoscopically fuse Brandom's own more developed pragmatics of assertion with Sellars's "below the line" account of representational relations to the world.

Brandom in this regard focuses on the following remark of Sellars's during his brief discussion of his nominalist theory of predication in *Mental Events*:

[I]t is a truism that the concatenation of 'red' with 'a' tells us that *a* is red.  
(Sellars, 1981, §43)

Now, Brandom correctly points out that this remark is not only *nota* truism – it is not even true. For in order for such a concatenation to achieve the status of being a predicative *telling* that *a* is red – as opposed to such tokenings occurring in various contexts in which they accomplish no such thing – we need a more basic account of what it takes for such a concatenation to constitute an *assertion*, in those cases where it does have that force. And this, he suggests, Sellars nowhere provides – or at least certainly not when Sellars goes on from this remark to give his nominalist account of the role of predicates as in principle *dispensable* devices for getting names to have a certain "counterpart" extensional character (such as being-joined-to-the-right-with-an-"is red") that is supposed to be uniformly correlated with specific complexes and sequences of corresponding objects in the world (in this case, with red objects).

I think Brandom's account in *Making It Explicit* of the social pragmatics of assertion – including also the various "above the line" sub-sentential roles of subjects and predicates and other functional elements in assertions, and of the *de re* idioms that serve to underwrite a conception of representational objectivity – constitutes a welcome and substantial development of Sellars's basic account of assertion as, roughly speaking, the norm-governed taking of a position within a wider language "entry/inference/exit" game of giving and asking for reasons. It is a detailed explanation of the force and content of such

Sellarsian assertional standings that Brandom's *Making It Explicit* has attempted to provide, displaying Sellars's philosophy in this respect, too, as a fruitful mother of hypotheses.

Despite the insufficient remark from Sellars quoted above, however, Sellars would surely agree that concatenating is not sufficient for saying or asserting. The relevant "above the line" normative semantic rule, in this case, is roughly that it ought-to-be the case (*ceteris paribus*) that speakers respond to red *a*'s in relevant circumstances by uttering "*a* is red". If such an utterance-uniformity is the result of the right sort of wider space of reasons, which involves the satisfaction of various other important pragmatic presuppositions (many of which only Brandom actually analyses and explains), such concatenations or utterings can then constitute *tellings to* or *assertings that*. As Sellars explains in the article, in one primary sense *what the job is* of any given predicate is to play a certain normatively functionally classifiable (i.e., •dot-quotable•) conceptual role of this kind within a language game or space of reasons. But in another related sense, Sellars hypothesizes, what *that* predicational job succeeds in generating at the most basic empirical level (rather than in the domains of mathematics or morality, for instance, on Sellars's view) is to give a name a certain empirical or "natural-linguistic" character that *thereby*— thanks to the very behavioral uniformities that have been generated by the higher level rule-governed language game — has in fact become systematically causally correlated with a different but corresponding character in the object that is *thereby* represented. It is perhaps Brandom's objection to this account in Sellars, rather than the latter itself, that has run together the two different levels that both he and Sellars in general correctly recognize need to be carefully distinguished from one another.

What Sellars's sloppy remark above is designed to remind us of, then, is that *assuming* that such an above-the-line inferential practice is in place and having real effects, what will be systematically generated below-the-line at the most basic level, concerning those very same rule-governed linguistic tokenings, is a highly complex set of language-world mapping and tracking relations. The sloppiness reflects Sellars's ambitious but inevitably awkward attempt to envisage the interplay of those two levels simultaneously (the difficult Virgin Mary task, as it were, of being chaste muse and mother of hypotheses in one expository go), in what I nonetheless continue to think remains a philosophically coherent stereoscopic approach to the natural-

representational upshots of certain regions of our normative-conceptual achievements as thinkers.

A similar kind of response, I think, should be made to a third general worry raised in Brandom's seminar in relation to Sellars's naturalistic account of representation in *Mental Events*. This objection concerns Sellars's "extended" application in *Mental Events* of the dot-quoting device, which is appropriate to linguistic role-players within a logical space of reasons, to non-language using animal representational systems (cf. Sellars, 1981, §§76–77). The worry is that this extension confuses between normative space of reasons dependent *meaning* or "signification" on the hand (the conceptual "of" of intentionality), and the supposed underlying naturalistic dimension of picturing-representation on the other (the nonconceptual "of" of sensory content, causal covariance, and tracking-isomorphism), in just the way that Sellars had accused the Thomistic philosophers of doing in his article, *Being and Being Known* (Sellars, 1963 ch. 2). But again rather than confusion what we have in Sellars's account above is a distinction between two kinds of normative space and two correspondingly different kinds of representation: namely, (2a) logical "space of reasons parasitic" *linguistic* representations or "pictures" (*qua* "natural linguistic objects", as Sellars calls them), and (2b) biological "selection space parasitic" nonconceptual representations or "pictures" (exploited, for example, by an animal's "mapping and tracking" sensory cognition and pursuit of its prey). The dot-quoting device would seem to be intelligibly and fruitfully extended to refer to the proper biological functions that constitute the sort of selection space within which nonconceptual animal representations, on this view, are possible.

The deservedly influential appropriations of Sellars's views on the myth of the given and the logical space of reasons by Rorty, Brandom, and McDowell have unfortunately carried the suggestion that the underlying naturalistic dimension of *representation* discussed in this section must be discarded if we are to be able coherently to preserve the irreducibly normative dimensions of Sellars's conception of our empirically contentful thought and perceptual knowledge. I have argued above that this is not true. At any rate, without a firm grip on Sellars's simultaneously naturalistic and normative conception of representation one cannot understand what he meant when he wrote in *Philosophy and the Scientific Image of Man* that

[W]hatever else conceptual thinking makes possible – and without it there is nothing characteristically human – it does so by virtue of containing a way of representing the world. (PSIM, p. 17)

## II

Which brings us finally to a second main stereoscopic task explored by Sellars, one that is no less controversial and, I think, conceptually cloudier than the first. While the first task attempted to integrate a causal-naturalistic conception of representation *within*, and partly parasitic upon, a conception of rule-governed conceptual representation, the second stereoscopic task involves taking a naturalistic explanatory stance *on* our higher-level rule-governed conceptual activities themselves. This second task breaks into two: one is to clarify the *irreducibility* of the relevant normative-pragmatic phenomena within the space of reasons; the other is to consider whether, and if so in what sense, it might make coherent sense to aspire to a fully adequate *naturalistic explanation* of those same irreducibly normative phenomena.

On the irreducibility question Millikan in this article correctly gestures toward at least two senses in which, for Sellars, the normative conceptual domain remains *conceptually and pragmatically irreducible*:

Thus, normative rules, for Sellars, are not translatable into nonnormative terms. Accepting a normative rule is not believing a fact but tending to be motivated in a certain way. (Millikan, 2005, p. 80)

For present purposes I am not concerned with whether or not Millikan has this just right, but rather want simply to endorse the idea that, in some sense, normative ought-to-be rules have an irreducible pragmatic status and functional role within Sellars's overall view. I have elsewhere emphasized the importance and pervasiveness of this dimension of normative-pragmatic irreducibility throughout my interpretation of what I call Sellars's *naturalism with a normative turn* (O'Shea, 2007, 2009). This comes out most clearly in Sellars's conception of what, in *Philosophy and the Scientific Image of Man*, he calls "the radical difference in level between man and his precursors", where this difference is conceived (following Kant and the later Wittgenstein) in terms of the irreducible normativity of human conceptual thinking and intentional action in general: «To be able to think is to be able to measure one's thoughts by standards of correctness, of relevance, of evidence» (PSIM, p. 6). On Sellars's stereoscopic view, however, this irreducibly and

constitutively normative dimension of human conceptual thinking and rationality *itself* calls for a careful scientific naturalist explanation:

There is a profound truth in this conception of a radical difference in level between man and his precursors. The attempt to understand this difference turns out to be part and parcel of the attempt to encompass in one view the two images of man-in-in-world which I have set out to describe. For, as we shall see, this difference in level appears as an irreducible discontinuity in the *manifest* image, but as, in a sense requiring careful analysis, a reducible difference in the *scientific* image. (PSIM, p. 6)

What is difficult, however, is to see exactly what Sellars takes such a naturalistic explanation of the normative dimension of human conceptual thinking to be, somehow explaining or analyzing “what appears as an irreducible discontinuity in the *manifest* image” to be in fact “a reducible difference in the *scientific* image”. In the works cited above I have examined Sellars’s further articulations of this global stereoscopic task in terms what he characterized as the *conceptual* (normative pragmatic) *irreducibility* yet *causal* (scientific naturalist) *reducibility* of various aspects of the manifest image. But these conceptions only take Sellars so far in his attempt to articulate what the problem is and what general form any solution to it must take. Here I want to close with some thoughts on how this second stereoscopic task arises in the works of Millikan and Brandom discussed in Section I.

Millikan remarks as follows on the *naturalistic* side of Sellars’s explanatory approach to the irreducibly normative dimensions of human cognition and conduct:

It is one thing to *use* semantic language, for example, to say and mean or to understand “‘rot’ means red”. But you can also *describe* the use of semantic language without using it. You can describe what patterns of response in a language community, along with the origins of these responses in a history of language training, and training of the language trainers, and so forth, constitutes that ‘rot’ means red in that community. You can understand what the ‘means’ rubric does without indulging in it. You can understand specific forms of semantic assessment without participating in the particular practices being examined. There are *truth-conditions* for “‘rot’ means red” of a perfectly ordinary, if very complicated sort. It’s just that it’s not the job of the sentence “‘rot’ means red” to impart the information that these truth-conditions hold. Rather, its job is to get one to use ‘rot’ as one already knows to use ‘red’. (Millikan, 2005, pp. 80–81)

The idea is that in this way one can in principle naturalistically *explain* not only what gives rise to but also, in some sense – this is the more controversial and difficult claim – what *constitutes* meaning-classificatory statements as such, without *using* “means” statements in any non-eliminable way in the explanans. This is not a view from nowhere, of course, but from within an explanatory conceptual framework with its own space of reasonings, which a normative “means” vocabulary can in turn make explicit. As I conceive it – granting that some of Millikan’s own remarks in the passage might unfortunately suggest otherwise – this is also not a “sideways on” view in the sense that McDowell criticizes in *Mind and World* (1994, e.g., pp. 34–36). A sideways on view, as McDowell there explains it, mistakenly presupposes that both a targeted system of concepts and its relationship to the world can be understood separately from and independently of an “internal” and engaged knowledge of the normative functioning of the relevant system of concepts. Whereas I think Sellars would agree with the idea that, for example, the functioning of normative-classificatory semantic vocabulary *will not even be a target that is in explanatory view* unless the explainer also understands its specific normative-pragmatic functioning (either from the inside or by efforts of interpretation from a relevantly similar normative-pragmatic space of reasons). The task is precisely in this way conceived as *stereoscopic* rather than “sideways on”.

One way to put this second stereoscopic ambition, I think, is provided by Brandom himself in his Locke lectures, *Between Saying and Doing* (2008). Brandom’s key methodological innovation in the Locke lectures concerns what he calls *pragmatically mediated* semantic relations between vocabularies, enabling him to present his “analytic pragmatist” as a successor to the classical logicist, empiricist, and naturalist “core programs” of twentieth century analytic philosophy. An example Brandom gives of what he calls (strict) “pragmatic expressive bootstrapping” within this account is the case of providing «an extensional metalanguage for intensional languages, as in the case of possible worlds semantics for modality» (Brandom, 2008, p. 11). (It is “bootstrapping”, for example, in the sense that the metalanguage is expressively weaker than the target language it explicates.) And then Brandom adds the following interesting example concerning Huw Price’s naturalism (2011):

One example of a claim of this shape in the case of pragmatically mediated semantic relations [...] is Huw Price’s pragmatic normative naturalism. He argues, in effect, that although normative vocabulary is not *reducible to*



naturalistic vocabulary, it might still be possible to *say* in wholly naturalistic vocabulary what one must *do* in order to be *using* normative vocabulary. If such a claim about the existence of an expressively bootstrapping naturalistic pragmatic metavocabulary for normative vocabulary could be made out, it would evidently be an important chapter in the development of the naturalist core program of the classical project of philosophical analysis. It would be a paradigm of the sort of payoff we could expect from extending that analytic project by including pragmatically mediated semantic relations. (Brandom, 2008, pp. 10–11)

In his important collection of essays, *Naturalism Without Mirrors* (2011, p. 29), Price in this spirit comments on the ironic flavor that this stereoscopic explanatory project takes on when one applies it to one's own normative practices: as a social scientist does, for example, when she temporarily views herself during such explanatory bouts as an example of her own general object of inquiry. There would seem to be nothing *incoherent* in this sort of non-reductive, naturalistic-explanatory aspiration, as long as the vocabularies of the explainings and of their targeted practices are both kept clearly in view. (Incidentally, Price himself, like Sellars, and in *this* respect unlike Brandom and McDowell, appears to be willing in principle to incorporate into his global pragmatic *anti-representationalism* an underlying dimension of naturalistic “mapping and tracking” representations at least in certain domains, in roughly the ways I have sketched in relation to the first stereoscopic task in section I.)

But what exactly is Brandom's attitude toward what he here praises as Price's “would be” naturalistic analysis of the use of normative vocabulary (i.e., according to which, as quoted above, it would be «possible to *say* in wholly naturalistic vocabulary what one must *do* in order to be *using* normative vocabulary»), as part of what generally features in Brandom's book as the superseded “core program” of classical analytic naturalism? Not only here but also in various places in commenting on Ruth Millikan's very different biological naturalism, Brandom offers praise and does not outright reject but certainly does not endorse the proposed naturalistic explanations of our normative-linguistic behavior.

Brandom's earlier *Making It Explicit* had presented norms as at once irreducible to the causal order and yet also as non-mysterious from a naturalistic point of view: on the one hand it is «norms all the way down» (1994, p. 44), and Brandom asserts that «Norms [...] are not objects in the causal order» (1994, p. 626); but on the other hand «Normative statuses are

domesticated by being understood in terms of normative attitudes, which *are* in the causal order» (1994, p. 626). In various places in *Making It Explicit* Brandom puts forward considerations that would seem to be entertaining something *close* to our second stereoscopic aim, doing so primarily in order to gesture toward an in principle available *de-mystification* of our normative practices from a naturalistic explanatory perspective, rather than as part of his own self-described task of explaining «what it is to grasp a propositional content» *per se*:

Thus no attempt will be made to show how the linguistic enterprise might have gotten off the ground in the first place. But it should be clear at each stage in the account that the abilities attributed to linguistic practitioners are not magical, mysterious, or extraordinary. They are compounded out of reliable dispositions to respond differentially to linguistic and nonlinguistic stimuli. Nothing more is required to get in to the game of giving and asking for reasons – though to say this is not to say that an interpretation of a community as engaged in such practices can be paraphrased in a vocabulary that is limited to descriptions of such dispositions. Norms are not just regularities, though to be properly understood as subject to them, and even as instituting them by one’s conduct (along with that of one’s fellows), no more need be required than a capacity to conform to regularities. (Brandom, 1994, pp. 155–156)

This passage brings out the key difficulty that would seem to be involved in the second stereoscopic task, a task that I characterized above in terms of the idea of taking a naturalistic explanatory stance *on* our higher-level rule-governed conceptual activities themselves. In the passage Brandom suggests that the abilities required in order both *to institute norms* and *to be subject to norms* – «to get into the game of giving and asking for reasons» – requires «no more [...] than a capacity to conform to regularities» of certain kinds. But at the same time, he makes clear, to *interpret* a community as engaged in a normative practice of giving and asking for reasons of this kind, and hence to be able to understand the conceptually contentful activities as such that result from and are constituted by such norms, is already to be engaged at the level of attributing and evaluating such normative statuses (it is to be engaged in “deontic scorekeeping”, to use the terms of Brandom’s model), rather than to be at the level of attempting to explain what is required to generate such normative statuses in naturalistic terms.

I think that there is much that is fundamentally correct – correct both in itself and as an interpretation of Sellars’s position – in the view defended in

different ways by both Brandom and McDowell that, to put it metaphorically, the shape of the normative dimensions that are constitutive of human rationality are, in an important sense, discernible only from *within* the perspective of the rule-governed activities that constitute such a “space of reasons” as such a space. Nevertheless, the sympathetic dissatisfaction with that outlook that is frequently expressed by naturalistic philosophers such as Millikan (and also Dennett 2010) is a reflection of a legitimate explanatory aspiration that was also shared by Sellars. It seems to me that there are coherent grounds for hope for further progress on this last naturalistic front while simultaneously stereoscopically retaining a conception such as Brandom’s of the normative-pragmatic irreducibility of human sapience within the “logical space of reasons”. I will close with a few final remarks on this thought.

Millikan argues that both Sellars and Brandom fall short in relation to this second stereoscopic task, suggesting (as noted earlier) that where «there may be a crack [...] is in Sellars’s treatment of the nature of linguistic rules and the relation of these to conceptual roles and thus to intentionality»:

Putting things bluntly, it seems that Sellars understands accepting semantic norms as merely displaying certain dispositions, dispositions to make certain moves in language and thought and dispositions to sanction these moves in others. Brandom claims that this sort of analysis will not do.

[...] Now, I agree with Brandom that conceptual norms must be disposition-transcendent, hence with his rejection of Sellars’s view of norms as derived from meta-dispositions to sanction. (Millikan, 2005, p. 81)

However, the grounds stated here for Millikan’s resistance to what she takes to be Sellars’s own allegedly *merely dispositional* solution to the second stereoscopic task is arguably based on a confusion of the aims of the two interrelated levels in Sellars’s account (the normative and the natural) that is similar to what we found in relation to Brandom’s resistance to the first stereoscopic task in section I. Brandom’s worry about the first stereoscopic task, we may recall, was that Sellars’s naturalistic, nominalist theory of predication-as-picturing allegedly fails to account for the normative force of assertional “telling” – while in fact, as we saw, this is not the job of those underlying “language game parasitic” representations, on Sellars’s view. In relation to the second stereoscopic task, just before her negative verdict expressed in the passage above, Millikan had carefully distinguished (as we saw in the passage quoted at the outset of this section) between, on the one hand,

the normative pragmatic level of rule-governed practices *internal* to which we say that things mean so-and-so, are true, and so on; and on the other hand, the naturalistic attempt to explain those rule-governed practices in terms of a more parsimonious scientific theoretical vocabulary. But when she then accuses Sellars of failing to account for the “disposition transcendence” of conceptual norms, she chooses to focus on the latter naturalistic explanatory perspective, rather than on the internally engaged, normative-pragmatic perspective. Surely Sellars, however, in this respect like Brandom, would and should address the disposition-transcending rule-following difficulties from *within* the fray of critically reflective perspectives in terms of which we engage each other and attempt to fix belief about an objective world, rather than in purely dispositionalist terms. The rule-following issues are admittedly difficult ones, but I would think that it is a mistake to hold, with Millikan above, that Sellars should be interpreted as impaling himself on the “dispositionalist” horn of the classic rule-following dilemma.

In relation to Brandom’s own “scorekeeping in a game” model, for its part, Millikan comments as follows: «There must be a deep divide between language and ordinary games that we should try not to obscure with a metaphor but instead to keep in full view» (Millikan, 2005, p. 81). She goes on to suggest that it was Sellars’s competing conception of *natural selection based* patterns of cognition and learning, as discussed in section I above, that can provide the required disposition-transcendent source of normativity at the properly conceptual level, too. As is well known, Millikan’s own detailed and sophisticated teleosemantic theory thus attempts to push the natural biological “selection space” model *all the way up* to account for the disposition-transcendent normativity of distinctively human conceptual cognition within a logical space of reasons. Here is just a snapshot of Millikan’s overall outlook on the biological nature of the constitutively normative dimensions of human thought and action (which she here happens to state summarily in terms of the familiar computer metaphor):

The human mainframe takes, roughly, stimulations of the afferent nerves as input both to program and to run it. It responds, in part, by developing concepts, by acquiring beliefs and desires in accordance with these concepts, by engaging in practical inference leading ultimately to action. Each of these activities may, of course, involve circumscribed sorts of trial and error learning. When conditions are optimal, all this aids survival and proliferation in

accordance with a historically normal explanation, one of high generality, of course. (Millikan, 1993, p. 95)

Unlike the *biological* theory of the normativity of disposition transcendent concepts and practical inference that Millikan develops in impressive detail, however, Sellars's focus in relation to our second stereoscopic task was primarily on the possibility of a non-reductive yet fully naturalistic (and broadly *expressivist*) account of the *intentions*, both community and individual, in virtue of which norms are instituted and rule-following behavior takes place (cf. O'Shea 2007, ch. 7, and 2009 for more on this). The challenge in this admittedly murky domain is for the account of norm-instituting intentions to succeed in being both *substantively naturalistic*, going beyond a mere "token-token physicalism" to explain causally the genesis and maintenance of norm-governed patterns of thought and behavior *as such*, while also successfully accounting for the dimension of normative-pragmatic irreducibility such that the relevant patterns can, in another sense, only be discerned by those engaging in them. Although this second stereoscopic task remains unfinished business, this is the place to which Sellars's own explanatory ambitions took him in his attempt to imagine how the gap might be bridged between the sorts of views later defended by Millikan and by Brandom.

We have seen that there are crucial theoretical domains in which "the son" and "the daughter" have each, from different directions, substantially improved upon Sellars's underdeveloped sketches in those regions, those fruitful sketches having served as the philosophical mother of their more detailed explanatory hypotheses. But we also saw that the son and the daughter each attempts – as one does in philosophy – either to have the social normativity "all the way down", in the case of the son, or the biological normativity "all the way up", in the case of the daughter. We found, further, that the grounds for the resistance of the son to Sellars's naturalistic hypothesis of both "logical space parasitic" and "selection space parasitic" *representational systems* – a hypothesis broadly embraced by the daughter – were arguably based on insufficient exploration of the shape of Sellars's stereoscopic proposal at this level. And likewise, the resistance of the daughter to Sellars's account of disposition-transcendent conceptual norms in terms of pragmatically irreducible yet naturalistically non-mysterious rule-following behavior – a hypothesis broadly embraced by the son – is also arguably based on an insufficient exploration of how a more indirect, demystifying naturalism about our institution of and conformity to social norms might be defensible.

Much more work needs to be done on each of the two stereoscopic tasks only briefly adumbrated here. But what has implicitly emerged by implication is that perhaps the hypothesis of a stereoscopic reconciliation of at least the hearts if not the full ambitions of these two sibling Sellarsian perspectives is worth pursuing further.

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