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Sellars on Functionalism and Normativity

1 Introductory

The term ‘functionalism’ is usually heard in connection with the philosophy of mind or cognition. The functionalism of Wilfrid Sellars, however, is in the first instance as response to the worries about the metaphysics not of mental states, but of meaning. Only late in his career did Sellars explore the possibility of extending his functionalism into an account of cognition. It has been suggested, though, that Sellars’ extension of his functionalist theory into subpersonal territory is not successful. In particular, there is a worry abroad that in order to be a functionalist about cognitive states, Sellars must succumb to a special form of the Myth of the Given. In this essay I will review and elucidate what I take to be the structure of Sellars’ functionalism, defending it from this worry. I will suggest a resolution of some apparent textual contradictions based in part on the chronology of Sellars’ writing, with the assumption that later writings express Sellars’ more nuanced views.¹

One of the characteristic features of Sellars’ philosophical style is his apparent need to lay out at least a schematic map of a large part of his philosophical system in order to properly set the context for any particular point. Consequently, in order to sympathetically explain those of his views as are applicable to the contemporary study of cognition, I will take a detour through Sellars’ philosophy of language, which is the home arena for his functionalism. Some aspects of Sellars’ nominalism will also be relevant, though I will forego the formidable task of including serious discussion of that topic.² However, I hope to show that a proper understanding the late Sellars’ views

¹ The correlation between time and quality in Sellars’ views is certainly not uncontroversial. The later views I will be discussing are sourced primarily from a 1981 paper (1981b), and that great Sellarsian philosopher Robert Brandom is fond of expressing his opinion that certainly by 1979 and the writing of *Naturalism and Ontology* Sellars’ thought had progressed from its ‘mature’ phase to its ‘*mesbuga*’ phase. A stand-up fight with Brandom on this topic, however, would require covering a lot of ground that is quite outside the focus of this paper. Therefore, I must beg the reader’s indulgence, and hope that my reading of Sellars stands on its own merits.

² Anyway, the core of Sellars’ nominalism seems to be his case for abstract entities being *dispensable* (cf. Seibt 1990 chapter 6, Sellars 1979, chapter 3, and his 1962a). Accordingly, for the purposes of the present

about representation requires the acknowledgment of many of his other commitments. I will not be concerned here to defend Sellars' views on language, but if the reader will bear with me through this scenic path I will endeavor to illuminate in due course their indispensability for understanding Sellars on cognition.

In section 4 I will return to cognition, discussing an early attempt by Sellars to explore the possibilities for functionalism and cognition. In section 5 I will discuss Sellars' mature account of representation and introduce the worry that it confounds the insights of the early Sellars. In the last sections I will address this worry by drawing upon the compatibility of Sellars' mature views on representation and his early views on normativity, and by gesturing at the connections between the topics I have discussed and Sellars' views on the nature of rational representation.

2 Rules and Functional Transitions

Sellars distinguishes priority in the *order of being* from priority the *order of knowing*.³ By way of illustration, Sellars explains that middle-sized dry goods are prior to microphysical processes in the order of knowing; we must become conversant with the interactions of tables and billiard balls before we understand our theories of molecular bonding or the strong force. Assuming scientific realism, however, the opposite priority holds in the order of being: there must actually be such microphysical processes in order for there to be tables.⁴ Likewise, although language is a latecomer in the order of being, Sellars claims that our best theories of the mind will presuppose an understanding of the structure of language.⁵

For Sellars, the starting point for understanding language is reflection on the normativity of language. Sellars suggests that “a language is a system of expressions the use of which is subject to certain rules,”⁶ but Sellars employs a somewhat subtle notion of rules. Rules, as they concern Sellars, come in two basic flavors. The first, *rules of action* (or *ought-to-do rules*), are the familiar sort of rule that are satisfied by agents who perform specified actions because of the rule. An example of such a rule might be “If one has

discussion, one need not be committed to a nominalist ontology so long as one accepts Sellars' analysis of language (for details, see his 1963).

³ Cf. 1981b 4–5, 14–15. When I cite Sellars, I will give section numbers for essays in which sections are less than a page length, and page numbers (usually from Scharp and Brandom) otherwise.

⁴ That is, it is *necessary* that there be such microphysical processes, and it is necessary that they be the specific microphysical processes of the theory (assuming the theory is true). This point should be familiar to readers of Kripke (1980).

⁵ Sellars 1981b § 5

⁶ Sellars 1954 § 1

made a promise, one ought to keep it.”⁷ The second flavor of rule is that of *rules of criticism* (or *ought-to-be rules*), such as “Clocks ought to strike on the quarter hour,” or “One ought to feel sympathy for the bereaved.”⁸ There is a kind of correctness involved in conforming to rules of criticism, but it is not the correctness of actions.⁹ Clocks cannot act, and feeling sympathy is not an action, so the strong (ought-to-do) sense of normativity cannot be in play in these cases. Nevertheless, there is a more subtle kind of correctness that belongs to clocks and the sympathetic. And this subtle correctness does not come into play when chalk falls or salt dissolves.

Sellars does hold that “learning to use a language is learning to obey the rules for the use of its expressions”¹⁰—i.e. that becoming a mature user of language necessarily involves the grasp of rules of action.¹¹ However, not all linguistic behavior can be characterized as action,¹² and many linguistic rules (though not all) are rules of criticism.¹³ Rules of criticism can be observed by what Sellars calls *pattern-governed behavior*, which is

behavior that exhibits pattern, not because it is brought about by the intention that it exhibit this pattern, but because the propensity to emit behavior of the pattern has been selectively reinforced, and the propensity to emit behavior which does not conform to this pattern selectively extinguished.¹⁴

Thus the correctness of a well-maintained clock is pattern-governed, for the precise timing of the clock’s chiming is selected for by the combined efforts of its designer, its maker and its keeper. Likewise the specific patterns of bee dances, whereby scouts communicate to foragers how to find food, are selected for by the environmental influences on the degree to which the transmission of genetic material to later

⁷ I am not proposing an analysis of promise-keeping in terms of rules of action—I am not sure that a promise ‘kept’ unintentionally is not truly kept.

⁸ Sellars 1969 pp. 59–61

⁹ Sellars 1974 p. 87. Sellars is talking about pattern-governed behavior in that passage and not rules of criticism as such, but I think his expressions can be unproblematically extended in light of the relation he supposes between those two notions and the common examples employed in their explication.

¹⁰ Sellars 1954 § 1

¹¹ This claim of Sellars’ is related to his claims about the development of children, mentioned in section 7 of this essay.

¹² Sellars 1969 pp. 61–62. Cf. also his 1967 §§ 35–36.

¹³ Sellars 1969 p. 61, and 1968 § 42. It has to be the case that some linguistic rules are rules of criticism, since if obeying rules of action presupposes understanding of the rule, and understanding the rule presupposes a grasp of language, then the view that all linguistic rules are rules of action threatens a regress. Cf. Sellars 1954.

¹⁴ Sellars 1974 p. 86. Cf. also Sellars 1954 §§ 12–17.

generations is successful. The constant acceleration of a falling body, on the other hand, is not selected for by intentional, social or natural pressure, and is therefore not pattern-governed, nor is it subject to rules of criticism. Sellars' view is that while many proprieties and intricacies of language use turn on rules of action, the rules that contribute to language's meaningfulness and its status as the medium of thought are rules of criticism,¹⁵ that are satisfied not only by the actions of agents but by pattern-governed behavior.

On Sellars' account, the patterns that are constitutive of linguistic meaning involve the occupation by language users of "positions in a language game."¹⁶ Sellars cashes out the notion of being in such a 'position' not in the Wittgensteinian way,¹⁷ but as 'saying that-p or having the short-term propensity to say that-p.'¹⁸ Sellars draws special attention to three kinds of pattern-governed linguistic behavior. First, *language-entry transitions* involve the occupation by a language user of a position in a language game as a response to a state of affairs that is not itself a position in a language game.¹⁹ The paradigmatic language-entry transitions are those from sensation to observation sentences. Second, *intra-linguistic transitions* involve the movement from one position in a language game to another, as by a material or formal inference.²⁰ Finally, *language-exit transitions*²¹ involve the movement of a language user from a position in a language game, to a state that is not itself a position in the language game. The transformation of practical intentions into actions are paradigmatic such transitions.²²

The upshot of Sellars' functionalism is that there is a dimension of meaning that is properly characterized as a sort of functional classification within a system of such classifications. Such a system may be called, in the more contemporary idiom, a *functional economy*, or simply an *economy*. The various functional items in the economy are referred to by dot-quoted expressions, whose full analysis involves the specification

¹⁵ Sellars 1969 pp. 61–62, 1981b §§ 10–11

¹⁶ Cf. Sellars 1954, esp. §§ 10, 16, 19ff

¹⁷ That is to say that language games for Sellars are not little institutions like guessing riddles, singing catches or following orders (cf. Wittgenstein § 23), but "the 'game' of *reasoning*" (Sellars 1954 § 31).

¹⁸ That is, occupying a position in a language game is cashed out for Sellars in terms of his verbal behaviourism—cf. Sellars 1974 p. 83.

¹⁹ The details of what is involved in such a transition is of course controversial (and Sellars himself discusses the complexities involved in such transitions in his famous 1956), but undoubtedly there are such transitions. In ignoring the details of what these and the other linguistic transitions consist in, I do not mean to suggest that either Sellars or I think that these details are simple or unimportant.

²⁰ Cf. Sellars 1953

²¹ Sellars seems to favor the expression 'language-departure transition' (cf. his 1954, 1974), but use of the term 'language-exit transition' seems to have become standard in the literature (cf. Scharp & Brandom's introduction, deVries 2005 p. 31, Rosenberg 2007b pp. 51, 157, 179).

²² Sellars 1954 p. 36.

of rules of criticism governing functional transitions—system-entry, intra-system, and system-exit—of functional complexes that include the item to be analyzed. Finally, these transitions are not satisfied by mere regularities or intentional actions *per se*, but are normative in the subtle sense that is satisfied by ‘pattern-governed behavior.’

3 Dot-Quotation and Functional Classification

One of the powerful bits of analytic technology Sellars brings to bear on this picture is the quotation mark. Sellars claims that quotation marks are used to create novel sortal predicates (common nouns) out of linguistic exemplars, but cautions that “to think that quoting is simply a device for formulating illustrating names of sign-designs is to take far too myopic a view of the power of quotation marks.”²³ The criteria of ascription for these novel predicates can be based on (say) phonological or typographical similarity to the quoted expression, but they can also be based on *functional* similarity to the quoted expression, where the notion of functional similarity is cashed out in terms of patterns of language-entry, intra-linguistic and language-exit transitions. When Sellars forms functional sortals, he marks his intentions typographically with the use of dot-quotes.

If one accepts this picture of meaning as functional classification, then one is in a position to appreciate one of Sellars’ favorite contentions: that the ‘means’ in statements like

‘*Rot*’ in German means red

does not express a relation between a word and anything—be it an abstract universal, or actual or possible red things, or what have you. Rather, the ‘means’ in such statements is properly analyzed as a special instance of the copula.²⁴ Such a statement should be understood to mean that German ‘*rot*’s are (in some sense) ‘red’s, though this can’t be quite right since the German word ‘*rot*’ is not identical to the English word ‘red.’²⁵ Sellars analyzes a ‘means’ statement like that above as

‘*Rot*’s in German are •red•.

That is, that the word ‘rot’ in German has the function of being a •red•, which we are to understand as being an item that in its language has the function that ‘red’s have in English. “Roughly to say what an expression means is to classify it functionally by means

²³ Sellars 1981b § 29

²⁴ Sellars 1974 p. 95

²⁵ Sellars 1981b § 28

of an illustrating sortal.”²⁶ Ultimately, dot-quoted expressions are promissory notes backed by the possibility of exhaustively articulating the ‘functional roles’ that are denoted by dot-quoted sortals in terms of the linguistic rules that govern the proprieties of their use. That is, in terms of the language-entry, intra-linguistic, and language-exit transitions that are associated with or inconsistent with expressions that include the functional sortal denoted.²⁷

It is important to recognize that functional classification is sensitive to contextual factors, for the propriety of asserting a functional similarity between expressions may depend on our interest in it. So Sellars suggests that

What counts as an •or• in one classificatory context may be classified as *like* an •or• in another. If Germans were to use ‘*oder*’ only in the inclusive sense, and we were to use ‘or’ only in the exclusive sense, we might, nevertheless, for some purposes, classify ‘*oder*’s as •or•s...²⁸

Sellars explains that if this were the case, the expression •or• could function as a generic sortal, of which inclusive and exclusive *or* would be species, though in English we would only have an illustrative term for the exclusive species.²⁹ Alternatively, “in other contexts”³⁰ it might be proper to constrain our use of ‘•or•’ to indicate the exclusive connective for which we have the straightforward exemplar. Presumably this context-sensitivity should be cashed out in terms of our interest at different times in certain transition patterns rather than others. This dimension of contextual variability for functional sortals should hardly be surprising, since one of their paradigmatic applications is for analyses of ‘means’ statements like those characteristic of inter-linguistic translation, and the proper translation of expressions between languages depends on the context. To take a contrived example, the French expression ‘*Parfois il faut voler*’ can be translated into English, in different scenarios, as ‘Sometimes you have to fly,’ or as ‘Sometimes you have to steal.’ A more serious example might be the Japanese expression ‘すみません’³¹ which in different contexts functions as an English ‘excuse me’ or as an English ‘I’m sorry.’ Thus in one case we might justifiably claim that ‘すみません’s are •excuse me’s, and in another case that ‘すみません’s are •I’m sorry’s without thereby holding that •excuse me’s are •I’m sorry’s, either in English, in Japanese,

²⁶ Sellars 1974 p. 95

²⁷ Sellars 1974 p. 96

²⁸ Sellars 1974 p.92n12

²⁹ Cf. also Sellars’ discussions of functional genera and species in his 1974 pp. 98–99

³⁰ Sellars 1974 p.92n12

³¹ in Roman characters: ‘*sumimasen*’

or in general. Dot-quoted sortals are promissory not only in that they are implicitly backed by patterns of language-entry, intra-linguistic and language-exit transitions, but also in that the truth of statements that employ dot-quoted sortals are subject to the same dimension of context-sensitivity as ‘means’ statements. Furthermore, this context-sensitivity of dot-quoted expressions generates tension between the vague and ambiguous functional sortals denoted by dot-quoted expressions, and strict functional sortals articulated only in terms of functional transitions.

4 Picturing and Anthropoid Robots

Sellars readily applied this functional account to language and to thought,³² but was for some time apparently reluctant to extend his functionalism to other (e.g. neural) contexts. Sellars’ reluctance reflects his well-known respect for the conceptual hazards surrounding the mind-body problem. Sellars’ most famous essay³³ is remembered chiefly for its warnings about the Myth of the Given, the philosopher’s fantasy that there are states that, like sensations, are non-conceptual as well as rationally significant, like beliefs. The Myth of the Given is one of the many hazards that occupy the frontier between the world of causal interactions, and the space of rational relations.³⁴ In “Being and Being Known,” (“BBK”)³⁵ Sellars distinguished between two kinds of representational isomorphism, called *picturing* and *signification*, which inhabit different sides of this frontier.³⁶ Signification is an isomorphism between rational notions, and is the sort of relationship for which we are supposed to give the non-relational analysis of meaning glossed above. That is, a statement such as

³² The best short treatment of Sellars’ account of meaning in language and thought, in his own estimation, was his 1974 (1979 p. viii).

³³ undoubtedly his 1956

³⁴ For clarity, I have taken the liberty of denoting the alternate sides (the causal and the rational) of this frontier with my own terms. Sellars himself uses an enormous variety of expressions. In his 1960 he refers to the ‘logical order,’ ‘intentional order,’ or ‘conceptual order’ on the one hand, and the ‘real order’ or ‘material order’ on the other. In his 1979 he adds ‘natural order’ to the latter list. On my reading, these ‘orders’ more or less correspond to the ‘manifest image’ and the ‘scientific image,’ respectively (Sellars 1962b), although that correspondence is not uncontroversial or without its complications. Moreover, Sellars’ reference to ‘orders’ creates confusion when mixed with his distinction between the ‘order of knowing’ and the ‘order of being’ in his 1981b, which is not obviously the same distinction—the latter distinction refers to orderings of priority rather than something like realms of discourse. I have decided to preserve Sellars’ terminology in the latter context at the expense of preserving his terminologies in the former contexts because it is Sellars’ later usage, and because it is easier to find synonyms for ‘order’ when (as in the earlier usage) it means something like ‘realm’ rather than ‘sequence.’ Ultimately, I thought that this replacement in exposition does the least violence to Sellars’ views.

³⁵ Sellars 1960

³⁶ Sellars 1960 § 32

In German ‘Mensch’ signifies man

should be analyzed not as a relation between the sign design ‘Mensch’ and the entity denoted by ‘man’ (men or *manhood* or whatever), but as a functional isomorphism between the word ‘Mensch’ and the functional sortal exemplified by the English word ‘man.’³⁷ In other words, the claim that

‘Mensch’ signifies man,

should, in the manner of ‘means’ statements, be understood as the claim that

‘Mensch’s are •man’s,

where to be a •man• is cashed out in terms of language-entry, intra-linguistic and language-exit transitions.

Picturing, on the other hand, is a matter-of-factual, not a rational or normative isomorphism. To explicate this notion, Sellars considers “the anthropoid robots of the future”³⁸ which are self-moving, have sophisticated wiring diagrams, and are equipped with radio and radar sensors and memory tapes. By printing on and reading from its tape, a robot creates and accesses representations of its environment and itself, which mediate its behavior. Thus the tape records the robot’s ‘observations,’ ‘inferences’ and ‘intentions’ as it goes about its business.³⁹ These representations, Sellars claims, are ‘pictures’ of the robot’s environment. The representations that participate in picturing, however, are to be construed merely as physical marks, though ones with special causal powers for the robot due to their place in the complex context of the robot’s inner machinery. Sellars calls such physical objects thus construed *natural-linguistic objects*.⁴⁰ Picturing, then, is a kind of isomorphism that holds between a bit of the world (say, lightning) and such a natural-linguistic object.

Sellars claims that the logical structure of ‘picturing’ statements such as

‘::’ pictures lightning⁴¹

³⁷ Sellars 1960 §§ 45–50, and § 52n13. Sellars had not yet developed all his apparatus (such as the use of dot-quotes to form functional sortals) but his discussion is a clear precursor to later ones, e.g. in his 1964.

³⁸ Sellars 1960 § 36

³⁹ Sellars 1960 § 37–39

⁴⁰ Sellars 1962c p. 212, and duplicated in 1979 p. 136

⁴¹ Sellars sometimes uses asterisk-quotes to create sortals based on physical similarity to a linguistic exemplar (e.g. in his 1963, cf. e.g. pp. 163–164n3). Since I only use such sortals in connection with picturing, however, contextual cues make such marking unnecessary.

is not to be understood along the functionalist lines outlined above. Unlike the analysis of signification statements, the ‘pictures’ in a statement like that above does express a relation between a sign design and some bit of the world.⁴² This is not to say that a symbol on the robot’s tape cannot *also* signify. Depending on just how sophisticated the robot is, we might wish to claim that

‘::’ signifies lightning,

meaning that

‘::’s are •lightning•s.

But there are some qualifications. For one, we would make signification claims in virtue of a construal of ‘::’s as symbols rather than as natural-linguistic objects. For another, Sellars claims that we are only tempted to make such claims in virtue of our recognition that ‘::’s (as natural-linguistic objects) picture lightning—that there is an isomorphism between these marks in the context of the robot’s wiring diagram and interactions, and instances of lightning in the context of the robot’s environment.

In this sense we can say that isomorphism *in the* [*causal realm*] between the robot’s electronic system and its environment is a presupposition of isomorphism *in the* [*rational realm*] between robotese and the language we speak.⁴³

That is to say that in the order of being, picturing-isomorphisms are prior to related signification-isomorphisms; the existence of the former is a necessary condition for the existence of the latter. Since Sellars’ anthropoid robot is clearly a stand-in for human bodies conceived as complex physical systems,⁴⁴ the suggestion seems to be that the firing-patterns of neurons (or whatever) *picture* bits of our environments. Furthermore, although it is in virtue of this picturing that our *symbols* signify, neuron-firings *qua natural-linguistic objects* cannot themselves be said to signify.

But which isomorphisms count as picturings? One might suggest that any causal isomorphism you manage to find—even one between the win-loss record of a college

⁴² Sellars 1960 § 40

⁴³ Sellars 1960 § 53. “Causal realm” and “rational realm” have been substituted for “real order” and “order of signification.”

⁴⁴ This suggestion is reinforced by Sellars’ claim in the same essay that “the intellect as belonging to the real order... is the central nervous system” (1960 § 59). Cf. also Sellars 1962b: “the scientific image of man turns out to be that of a complex physical system” (p. 393).

football team and the growth rate of a tree in Cleveland—counts as a picturing. But this is not what Sellars has in mind. Sellars claims that “the patterns on the tape do not picture the robot’s environment merely by virtue of being patterns on the tape.” Rather, the symbols on the tape are like a map, which is only a map at all by virtue of a method of projection. Sellars’ illustrative example is the inner surface of the groove of a phonograph record, which can be said to picture a sound or a performance. However, the sense in which the groove of an LP pictures a sound depends upon the phonograph’s ‘method of projection’ from the groove to the sound, and “cannot be abstracted from” it.⁴⁵ Likewise, the natural-linguistic objects on the robot’s tape picture only in virtue of the rest of the robot, which (in this context) serves as a method of projection from the information on the tape to the intelligent behavior of the robot.

I do not plan to object to this Sellarsian story as far as it goes, but it is misleading. From ‘BBK’ it would be easy to presume that in Sellars’ view there are two sorts of representational isomorphism, differentiated by whether they concern rational symbols or natural-linguistic objects, and that Sellars’ claim about them is that the former are functional and the latter are relational. That is, it would be easy to read Sellars as claiming that whereas representational isomorphisms in the rational realm are functional, representational isomorphisms in the causal realm are relational. I will suggest that this is not Sellars’ view. That picturing is a non-rational isomorphism does not imply that all isomorphisms between non-rational items are picturings.⁴⁶ After all, Sellars provides no argument that picturings are relational; he stipulates that when he is discussing picturing, he is discussing a causal isomorphism that it is relational.⁴⁷ This stipulation is followed up quickly by a qualification that a picture is only a picture in virtue of its relation to a ‘mode of projection.’ I read Sellars’ later writing on representation as the development of his thought in ‘BBK’ and elsewhere. Specifically, Sellars’ account of animal representation develops the possibility, already present in his synoptic view so far described, of functional characterization for non-rational systems.

5 Mapping and Animal Representation Systems

Sellars proposes his account of animal representation in a late essay entitled “Mental Events” (“MEV”).⁴⁸ A representational system (RS) represents objects as being of a

⁴⁵ Sellars 1960 § 40

⁴⁶ It would be a misreading of Sellars’ mature position, anyway. Whatever Sellars’ thoughts in 1960 may have been, he did go on to develop a more nuanced account of representation in the natural realm (1981b) while continuing to develop his account of picturing in his 1968 and his 1979.

⁴⁷ In Sellars 1960 § 40

⁴⁸ Sellars 1981b

certain character or as related in some way. The RS does this by way of symbols that stand for objects, and conventional signs—possibly concatenations with other symbols, e.g. predicates, or modifications of the object-symbols, e.g. printing them with a distinctive typeface or spatial arrangement⁴⁹—with which that character or relation is indicated.⁵⁰ Maps, for example, use such spatial and typographical conventions to represent locations as having certain characters (Chicago as being a metropolis) or as related in certain ways (Chicago as northeast of Urbana).⁵¹ On this definition, RSs are fairly common—animals and humans are RSs, as are maps and languages. A person reading place-names from a map involves multiple layered RSs, or perhaps one RS with lots of moving parts. But not all RSs are equal; for example, “the map is a parasitical RS. It depends for its mappishness on its use by human RSs.”⁵² This is because a map is no map at all without a mode of projection. This is not the same as requiring that a map be actually used; a map is a map whether or not it is ever used, but it cannot be a map if there is no way to use it.⁵³

Animal RSs are a relatively sophisticated subset of RSs, because they are self-sufficient in the way that maps and phonograph records are not. An animal RS is a “perceiving—inferring—remembering—wanting—acting organism.”⁵⁴ On Sellars’ view, a representational state of an animal represents only in virtue of its place in the animal’s RS, and is in some sense like a map:

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.⁵⁵

⁴⁹ Cf. also Sellars’ discussions of the perspicuous logical language ‘Jumblese’ in his 1962a, 1963 IX (pp. 192–195), 1979 p. 133.

⁵⁰ Sellars 1981b § 47

⁵¹ Sellars 1979 p. 133. Indeed, Sellars says “the map belongs to a Jumblese dialect” (ibid).

⁵² Sellars 1981b § 62

⁵³ Cf. Sellars 1979 chapter 5 § 77 (p. 134)

⁵⁴ Sellars 1981b § 71. Sellars’ original passage indicated that any RS is a ‘primitive or sophisticated form’ of such an organism. However, it is difficult to construe, say, a literal map (again, as one of Michigan) as such an organism by itself. On my reading, the sophisticated RSs are those that are ‘perceiving—inferring—remembering—wanting—acting organisms’ that do not require other such organisms to perceive, infer, remember, want, or act. So both literal maps and animal representational states (figurative maps) are relatively ‘primitive’ RSs, whereas organisms are relatively sophisticated, and humans are particularly sophisticated.

⁵⁵ Sellars 1981b § 56

An animal RS is essentially a map-making and map-using device, and its representations are its maps. Sellars proposes two requirements that a state must satisfy to count as a map for an RS: it must be “structurally similar” to the location mapped,⁵⁶ and it and other map-states must be

so connected with each other and with the [animal RS]’s locomotor activity that together they constitute what can not too metaphorically be characterized as a strategy for finding [the location].”⁵⁷

The first requirement, of structural similarity, is the requirement that a map *picture* whatever it is a map of. The second requirement, of having a role in the behavior of an animal RS, is the requirement that there be a suitable mode of projection for the picture. For a map is a parasitical RS that requires a mode of projection (a self-sufficient RS) for its mappishness. This mode of projection is a ‘strategy’ for finding represented objects that essentially involves the manipulation of related representational states (e.g. of *smoke* and *fire*) that are in turn geared to the sensational and behavioral capacities of the organism.⁵⁸ This second requirement, however, seems to suggest that there can be a functional account of picturing,⁵⁹ since it is only in virtue of the *function* of a natural-linguistic object in the activity of a sophisticated representational system that it can be said to picture at all.

Indeed, Sellars himself suggests that a functionalist characterization can be extended to non-linguistic RSs. Since Sellars applied his non-relational analysis of meaning not only to linguistic items but to thoughts, he sees no reason not to extend the non-relational analysis to representational states. Thus:

functional sortals apply not only to *expressions* in any *language* which play in that language a *relevantly similar* role to that played in our language by the dot-quoted expression, but, as we can now put it, to representational states in any RS which play in that RS the relevantly similar role in question.⁶⁰

Sellars seems to bring the whole battery of applications of his functionalist account to bear on the analysis of animal representational states:

⁵⁶ Sellars 1981b § 63

⁵⁷ Sellars 1981b § 64

⁵⁸ Sellars 1981b §§ 66–69

⁵⁹ Though the sense in which it is a functional account of ‘picturing’ is qualified by Sellars’ observation of the ‘notorious “ing-ed” ambiguity’ (1956 § 24), as I will discuss below in section 6.

⁶⁰ Sellars 1981b § 76

If... there is a relevant degree of similarity between the functioning of a certain state, ϕ , of an animal's representational system and the function of 'this is triangular' in our own representational system, then we can appropriately say

ϕ -states mean *this is triangular*

ϕ -states stand for (the proposition) that this is triangular

i.e.

ϕ -states are *this is triangular*s⁶¹

Sellars thereby countenances the possibility of applying his functional analysis of language and thought to the representational states of creatures that do not have language.

However, there is a worry abroad⁶² that in extending his functional analysis to causal states, Sellars (of all people) has run afoul of the Myth of the Given. The provision of a functional analysis for causally-described systems apparently conflicts with Sellars' claims in "BBK." Presumably, the anthropoid robot is a sophisticated (self-sufficient) RS, and we are to consider the marks on its tape, which picture the robot's environment, to be its representational states. Now, we can consider the robot's tape-states as symbols, in which context it is licit to analyze their content according to Sellars' functional account, e.g. that ':'s are *lightning*s. However, if animals are not rational creatures, one might suppose that animal RSs *as such* are causal RSs. Just as the anthropoid robot can be conceived as a rational or as a causal system, the animal RSs that are 'innate endowments'⁶³ of human RSs are human RSs *construed causally*.⁶⁴ The physiological states of an animal RS would then be natural-linguistic objects, not symbols as such, and could not be said to *signify*. If states of animal RSs, ϕ -states, are natural-linguistic objects belonging to the causal realm, they cannot serve as *this is triangular*s, which are *ex hypothesi* positions in the "game of reasoning," and therefore states in rational space. Or, to once again pit the early Sellars against the Sellars of "MEV," describing something as a state of an animal RS is giving it an empirical description, and

⁶¹ Sellars 1981b § 36. It is significant, however, that in this particular passage Sellars' extension of functional characterizations is conditional. Sellars will qualify his stance on propositions later, in § 77 of the same essay.

⁶² I take this worry to be one shared by Ulf Hlobil and Robert Brandom (Brandom 2009, part one).

⁶³ Sellars 1981b § 57

⁶⁴ I do not mean to claim that Sellars actually uses the notion of an 'animal representational system' in this limiting sense, but since it is a perspicuous way to state the worry I will continue to talk of animal RSs in contrast to rational (e.g. human) RSs.

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.⁶⁵

I contend that the Sellars of “MEV” does not make these errors. My vindication of this Sellars by the lights of the “BBK” Sellars will proceed in three phases. First I will qualify, and thereby begin to flesh out, Sellars’ claims about animal representation. Second, I will illuminate the connections between Sellars’ early views on normativity and the possibility he explores in “MEV.” I will conclude that if Sellars has gone wrong in “MEV,” the roots of his late error were present (indeed, prominent) in his early⁶⁶ philosophy of language. If Sellars’ later development of his functionalism is flawed, then, it is not because it conflicts with the account he gave earlier in his career. Finally, in section 7, I will gesture at Sellars’ positive story about what there must be in the order of being for there to be full-blooded rational representation.

6 Normativity and Pattern-Governed Behavior

Recall that in section 3 I observed the tension between functional classification by dot-quotation and functional classification by articulating transitional patterns. Sellars returns to this theme in “MEV,” making an important concession that illuminates this cleavage between dot-quotation and transitional patterns. It is the latter that are the essence of Sellars’ functionalism. The device of dot-quotation is a useful trick, indeed a powerful analytic tool, but it depends for its value on prior patterns of language-entry, intra-linguistic and language-exit transitions. Dot-quotation allows the easy formation of functional sortals based on a linguistic exemplar from our language, but its application is limited to states of systems that are ‘relevantly similar’ to exemplars of our language. Functional sortals formed through dot-quotation must be backed by the possibility of articulating the transitional patterns that are associated with or inconsistent with instances of the sortal. Thus Sellars cautions us:

⁶⁵ Sellars 1956 § 36

⁶⁶ By which I mean that the possibility of Sellarsian ‘animal cognition’ emerges from Sellars’ development of his notion of ‘pattern-governed behavior,’ which appears in his 1954—one of the earliest essays of his that I cite.

That it might not be possible to formulate [specific functional classifications] by the use of the dot-quoting technique serves only to remind us that the latter, however useful, is merely a useful dodge.⁶⁷

Sellars' acknowledgement of this 'dodge' opens up a space in his view for 'functional' systems that are quite different from our language, or from language at all. To be sure, Sellars still holds that we understand functional systems by analogy with language, but the analogy need not concern the content of particular functional items; it may merely concern the relational structure that those items have in a system. That is, we may understand some functional systems not because we can compare their items to functional sortals of English, but because like English their functions are determined by patterns of system-entry, intra-system and system-exit transitions.

Sellars addresses some of the gaps that arise between language and animal RSs, for his willingness to find •this is triangular•s in the RS of, say, a rat is not *ipso facto* a willingness to attribute to the rat's RS states which function for the rat *exactly* as •this is triangular•s do for, say, geometers. Sellars introduces the rat by remarking on the (somewhat bizarre) case of a rat that has "acquired the propensity to leap at panels with varieties of triangles painted on them."⁶⁸ A rat that leaps selectively at triangles would seem to have in its RS a representational state that functions in some respects (perhaps only for a subset of system-entry transitions) like 'this is triangular's in English. So we might be perfectly willing, for some purposes, to grant that the rat's RS contains •this is triangular•s. However, Sellars remarks that

a much greater degree of integration of responses to triangles *as* triangles into the rat's RS is required before we can appropriately say that the rat has even the most primitive concept of a triangle. Primitive inferences would also be involved. Thus a rat's φ -state wouldn't be a state of representing something as a triangle unless it had the propensity to move from the φ -state to another state which counts as a primitive form of representing it as 3-sided or as having, say, pointed edges.⁶⁹

So at this point Sellars has found •this is triangular• states in the rat's RS,⁷⁰ but claims that more showing is required before we can also find •triangular• states in the rat's RS.

⁶⁷ Sellars 1981b § 77n9

⁶⁸ Sellars 1981b § 54

⁶⁹ Sellars 1981b § 58

⁷⁰ Sellars does not mention the rat in the above-quoted passage from 1981b § 36, but mentions the rat when alluding to that passage in § 77.

Depending on our interest in the rat and in *•triangular•*, we may take the intra-linguistic transition from *•x is triangular•* to *•x is trilateral•* is a fairly essential transition. Additionally, we may seriously doubt that a rat's RS can be meaningfully said to contain *•trilateral•*s that are distinguishable from and generally preceded or followed by *•triangular•*s. In such a case, although we grant that the rat's RS contains *•this is triangular•*s, we may very well deny that the rat's RS contains *•triangular•*s, since, for example, the rat's understanding of triangles is too primitive for it to be capable of learning congruence theorems.

In fact, Sellars even withholds attribution to the rat's RS of states that function as the proposition *that this is triangular*.⁷¹ That is to say that Sellars allows that the rat has states that function as instances of 'this is triangular' in English, but not states that function as the *expression kind* of which they are instances. Sellars analyzes propositions not as sortal predicates formed from sentences (e.g. '*•this is triangular•*'), but as distributive singular terms, which he indicates by prefixing 'the' to a sortal predicate, e.g. 'the lion' in 'the lion is a mammal.'⁷² So while Sellars suggests that the animal RS of his trained rat has states that are *•this is triangular•*s, he does not take the rat's RS to have states that are *•the •this is triangular••*s.⁷³

So Sellars does respect important limitations to the extension of his functionalism to causal contexts. Animal RSs can contain states that function as sentences for a linguistic RS, but it is often less plausible that they contain states that function relevantly like words, and unless they are rational (i.e. distinctively human) RSs they cannot contain states that function as propositions (though I will put off until section 7 the elaboration of this last point).

In so qualifying Sellars' extension of his functionalism, however, I have not yet defused the worry I mentioned. The early Sellars was wary of confusing items construed rationally with items construed causally, e.g. symbols with natural-linguistic objects. The worriers ask: doesn't Sellars, even in this qualified and limited extension, confuse ϕ -states

⁷¹ Sellars 1981b § 77. In fact, though, Sellars is frustratingly vague and inconsistent. Sellars does seem to suggest earlier in § 36 that states of the rat RS can 'stand for' propositions, and in § 77 Sellars suggests that in that earlier passage he observed the qualification I am articulating about sentences vs. propositions, though he did not. However, the interpretation I offer is consistent with Sellars' commitments (as I read him), and with the place of § 77 in the flow of Sellars' essay—between his explicit extension of functional characterization to animal RSs, and his explanation of the difference between Humean and Aristotelian RSs.

⁷² Cf. e.g. Sellars 1962a p. 9, 1963 pp. 166–167

⁷³ Cf. Sellars 1963 (e.g. pp. 179) for the gritty details of this analysis. I take his revision of '*the •x is triangular•*' to '*the (•triangular•INDCON)•*' (cf. pp. 195ff) to apply to his analysis of logical variables, rather than expressions for which there are suitable illustrative sortals (e.g. '*•this•*' for '*this•*', rather than *INDCON* for '*x•*').

as symbols with φ -states as natural-linguistic objects? That is, Sellars' extension of his functional analysis to animal RSs seems to rely on an equivocation about whether representational states of animal RSs are causally-individuated items or potential moves in the 'space of reasons.' I contend that Sellars has not made this error, at least not by the lights of the early Sellars. If Sellars has run afoul of the Myth of the Given, he did not do so when he extended his functional analysis to animal RSs in "MEV," but when he laid the normative groundwork for his account of language before "BBK." Sellars countenanced the possibility of a functionalist science of cognition when he made the functional proprieties of language a matter of the observance of rules of criticism. If functional-transitional proprieties can be satisfied in the way that rules of criticism can be satisfied, then any pattern-governed behavior has the right normative character to be characterized functionally. According to Sellars, then, rats and bees and clocks and anthropoid robots, no less than language and thought, are amenable to functional characterization.

In short, the worry raised above is right-headed in that it demands of functionalist systems that their transitions be *normative* and not mere regularities. However, my diagnosis is that the worry is wrong-headed in that it overlooks the subtle sense of normativity—that which accompanies rules of criticism rather than rules of action—that Sellars imputes to language as a representational system. Like language, in which the inferential articulation of an expression is constitutive of the meaning of the expression, the 'inferential' articulation of a representational state in terms of system-entry, intra-system and system-exit transitions is constitutive of the content of the representational state. What a representational state *pictures* is determined by the *functional classification* of that state within an RS. The demarcation between rational and non-rational RSs does not coincide with the demarcation between systems that are amenable to functionalist characterization and those that are not. So Sellars does allow in "MEV" that natural-linguistic objects can be items in a functional economy, and therefore that they can in principle be denoted by dot-quoted expressions. But he does not thereby admit any natural-linguistic objects into the space of reasons.

The trick is that although signification-isomorphisms *ex hypothesi* can only hold between symbols in the realm of rationality, dot-quotation is not so limited. Dot-quotation trades on functional isomorphisms, and since functional systems come in both rational and non-rational flavors, dot-quotation can span the gulf between the world of causes and the space of reasons. However, there are certain kinds of functional isomorphisms (e.g. between propositions) that cannot hold across this gulf, and Sellars

identifies the snag as one of the important conditions (in the order of being) of the possibility of rational thought.⁷⁴

The Sellars of “MEV” proposes a functional account of picturing, and one that does not conflict with his claim in “BBK” that picturing-isomorphisms are to be understood in the logic of relations and not according to the functionalist analysis that belongs in the first instance (though *not* exclusively) to signification-isomorphisms. This maneuver is possible because of Sellars’ care about “the notorious ‘ing-ed’ ambiguity.”⁷⁵ There are two things we call representations: *representings*, or episodes in which representation occurs, and *represented*s, or the content of a representational episode. Sellars is not proposing a functional account of *pictured*s. The content of picturing episodes is still to be understood as a relation between the structure of the picture and the structure of what is pictured. So a map of Michigan pictures Michigan because of the isomorphism between the structure of the symbols on the map, and the structure of locations in Michigan. However, the means by which picturing episodes are made possible, the preconditions of *picturings* in the order of being, are to be understood for animal RSs in the context of an RS construed as a natural-functional system. So that the map is contentful at all depends upon there being a mode of projection, a way of reading the map to guide one’s movements in Michigan more or less successfully.

Sellars’ account is of a sort of picture-sandwich on a functionalist bun, only the top of which is sprinkled with the toasted sesame seeds of rationality. Rational-functional patterns of the sort that animate the meanings of thoughts and linguistic expressions, and that back translation statements and signification-isomorphisms,

⁷⁴ Sellars does not revisit ‘signification’ in his later essays, so in fact there is room for dispute about how and whether to apply the notion to what I have called Sellars’ ‘sandwich.’ I have treated signification-isomorphisms as functional isomorphisms between items in the space of reasons, but one could make the case that we should consider signification-isomorphisms to be in the offing whenever we classify an item in a foreign RS in terms of a dot-quoted sortal. One could even insist on this interpretation that the terms of a signification-isomorphism must be symbols having significance in the space of rationality. In the face of this semantic maneuver, however, I would insist that the cleavage between functional classification by dot-quotation and by functional-transitional articulation, described in sections 3 and 6 of this essay, is of a far deeper kind than I had admitted. For I have tried to argue that Sellars embraces the existence of functional-transitional proprieties belonging to the causal realm—in robots, rats and record-players—and that these natural-functional systems are a precondition in the order of being for the possibility of picturing, which in turn is a precondition for the propriety of signifying. An interpreter who is determined to hold that signification is involved in any use of the dot-quotation device would have to accept that the device of dot-quotation is unsuited to the environment of the order of being. Rather, functional-transitional articulation would be seen as a mode of functional classification in the order of being, while dot-quotation would be a mode of functional classification in the order of knowing. In the remainder of this essay, however, I will ignore this interpretation and the details of its articulation.

⁷⁵ Sellars 1956 § 24. Cf. also 1969 § 63

depend in the order of being upon picturing relations. However, these picturing relations themselves depend in the order of being upon having a potential place in a natural-functional structure (e.g. an animal RS) that can serve as a mode of projection.

7 Rationality and the Space of Reasons

In the final paragraphs of “MEV,” Sellars is at pains to show that he does not, in virtue of this extension of his functionalism, take the states of animal RSs (construed as natural-linguistic objects) to be positions in the space of rationality. Amenability to functional characterization is not, for Sellars, a property that is coextensive with belonging to the realm of rationality. The intra-system transitions of animal RSs⁷⁶ merely *ape* reason.⁷⁷ He does, however, take there to be intra-system transitions in animal RSs that we are to understand by analogy with logical inference, and even *to be* inference, for “such inferential patterns are uniformities in the occurrence of representational states.”⁷⁸ This last claim is surprising—surely an inference is not merely the sequential occurrence of thoughts or representational states; surely an inference is the sort of thing that is subject to rules. Sellars’ claim that inferences are uniformities, however, does not entail that they are *merely* uniformities, nor that all suitable uniformities are inferences. The inferential patterns to which Sellars is referring are uniformities in sequences of representational states of animal RSs *that constitute an animal’s strategy for finding a represented object*.⁷⁹ These patterns, however, have been selected for in the evolutionary and personal history of the animal RS (in normal circumstances⁸⁰). In short, the uniformities in question constitute pattern-governed behavior. They are therefore not ‘merely’ causal uniformities, but uniformities that are subject to conditions of correctness of the kind expressed by rules of criticism.

The story that Sellars tells in “MEV” about the difference between animal and rational RSs is that rational RSs are ‘logical,’ whereas non-rational RSs are ‘pre-logical.’ By way of illustration Sellars explains that

⁷⁶ Sellars 1981b introduces the term *Humean RS* to describe what I have been calling (merely) animal RSs, and *Aristotelian RS* to describe rational RSs (§§ 85ff). Since I already have vocabulary in play in this essay that functions as these terms do, I will forego their use in the main text.

⁷⁷ Sellars 1981b § 90

⁷⁸ Sellars 1981b § 67

⁷⁹ Cf. Sellars 1981b § 66–67

⁸⁰ And though I will not articulate it here, I expect that an analysis of the phrase ‘normal circumstances’ for phylogenetic and ontogenetic development here is in the offing which is similar in essentials to Sellars’ analysis of ‘normal conditions’ for perception in his 1956. The gist being: normal circumstances are just those circumstances in which the patterns of an RS are those that were selected for.

inferences involved in a pre-logical RS have the form which is illustrated by the sequence

•Smoke here•, •fire nearby•

but not illustrated by

•If smoke anywhere, then fire nearby there•

•Smoke here•

•Fire nearby•⁸¹

Logical RSs, on the other hand, have transitions that can be characterized by either sort of illustrative sequence.⁸² The upshot of Sellars' illustration is that what he calls logical RSs have 'standing' representational states (like •If smoke anywhere, then fire nearby there•) that function as rules of inference,⁸³ and these standing states represent intra-system transitions of the RS itself.⁸⁴ Standing states like the one in the above passage by mentioning statement-kinds. Thus it would be within the spirit of the Sellarsian apparatus to claim that the standing state in the above passage can be rephrased

•(The •Smoke here•)s entail (the •fire nearby•)s•⁸⁵

The essential point, as I take it, is that rational (logical) RSs are those that represent their own functional transitions, whereas non-rational RSs do not. But logical RSs don't represent their own transitional proprieties for the sake of redundancy; they represent their transitional proprieties so that those proprieties can become objects of scrutiny. In connection with the development of human children, Sellars explains that

The child begins at the 'pattern governed' level of verbal behavior but subsequently becomes a full-fledged member of the linguistic community and thinks thoughts (theoretical and practical) not only about *non-linguistic* items... At this later stage, he can not only reason *in accordance with* entailments, he can reason *about* entailments.⁸⁶

⁸¹ Sellars 1981b § 85. The original passage uses single-quotes instead of dot-quotes, but the passage follows § 76n8 in which Sellars states his intention to "use ordinary quotes in place of dot-quotes" for the remainder of the essay.

⁸² Sellars 1981b § 89

⁸³ Ibid. Cf. also Sellars 1954 §§ 25–29

⁸⁴ Cf. Sellars 1953

⁸⁵ The parentheses are strictly unnecessary. However, since dot-quotes do not come in typographically distinct opening and closing varieties, the parentheses are included to make the expression easier to read.

⁸⁶ Sellars 1973 § 32

Animals, like children, are endowed with RSs whose transitions are pattern-governed in Sellars' sense. However, unlike animals, human children have the ability to represent not only their physical environment but their own intra-linguistic transitions. That is to say, human RSs are capable of containing representation states that function not only as sentences (e.g. '•this is triangular•'), but as propositions (e.g. '•the •this is triangular••').

The property of animal representational states that prevents them from occupying real estate in the space of reasons is that the RSs to which they belong (animal RSs) is that they do not represent their own functional transitions. As a consequence, animals can infer in accordance with rules, but they cannot infer *about* rules. All their meta-inferences are, so to speak, handled by their evolutionary and personal history. It is the second-level capacity to infer about inferences that enables an RS to be rational, and for its representations to be in the space of reasons. The space of reasons is the space of "justifying and being able to justify what one says."⁸⁷ The representational states of pre-logical RSs are not states in this space, because such RSs are not able to justify what they say, or what they think, or what they represent.

Of course, in characterizing states of animal RSs as '•this is triangular•s, we are characterizing them such that certain justificatory connections become salient to us. But we do not, merely through the use of dot-quotation, give place to the states of the animal RS in the space of reasons; we merely help ourselves to an *analogy* with states of language that occupy places in the space of reasons. Nothing of significance for the state of the rat follows from our ability to understand it by analogy with inferentially-articulated states. Even the significance of empirical descriptions, which are the paradigmatic contrast-class to states in the space of reasons,⁸⁸ is made perspicuous through analogy to the inferential proprieties of an analogous belief-state. Thus I understand that if the chalk is released it will fall, because I recognize the inferential propriety of inferring the consequent from the antecedent. Sellars' willingness to describe states of a rat's RS as '•this is triangular•s does not bely his expectation that the rat can justify its ϕ -state; the dot-quotation in this context is merely an illustrative shorthand, licit within a certain contextual frame, for the natural-functional transitions governing the rat's representations. Sellars does not expect the rat's '•this is triangular•s to count as full-blooded inhabitants of the space of reasons unless he expects to find them accompanied by '•the •this is triangular••s.

⁸⁷ Sellars 1956 § 36

⁸⁸ Cf. the key passage in Sellars 1956 § 36

8 Concluding

My aim was to produce a sketch of Sellars' functionalism that, while sometimes schematic and dogmatic, illuminates in a relatively perspicuous fashion the Sellarsian case for cognitive functionalism. Language is a system of rules for the use of expressions, but these rules are normative in the subtle sense that rules of criticism ('ought-to-be' rules) are normative. Rules of criticism need not be observed through intentional action, but can be observed by pattern-governed behavior, or behavior that has been selected for. I then reviewed the two modes of functional classification that Sellars discusses. The first involves the articulation of proprieties of patterns of language-entry, intra-linguistic and language-exit transitions. The second mode, utilizing the device of dot-quotation, involves the formation of a functional sortal based on a familiar exemplar, and is parasitic on the possibility of the first mode of classification. The later Sellars recognized that if the basis for functional classification is ultimately a system of pattern-governed transitions, then functional systems (and systems to which dot-quotation can in principle be applied) are not coextensive with rational systems of representation.

One of the critical pillars of this account of cognitive functionalism is Sellars' notion of pattern-governed behavior. Not much was said in the foregoing in defense of Sellars' commitment to pattern-governed behavior and its ability to do all that he needs it to. On the reading offered here, pattern-governed behavior must be a robust and relatively basic metaphysical notion, capable of distinguishing the teleological behavior of natural organisms from the regular movements of physical bodies. Furthermore, pattern-governed behavior must not only be capable of satisfying but, in some circumstances, of generating rules of criticism. Since Ruth Millikan's work⁸⁹ is on just this topic, however, the rigorous evaluation of the notion of pattern-governed behavior takes one quite afield of Sellars.

I hoped to show that a Sellarsian science of cognition need not succumb to the Myth of the Given, and that the elements of Sellars' account of representation that worry some of his interpreters are consequences of Sellars' early views. Sellars' account of representation is the exploration of what is, in his 'synoptic vision,' a stable middle-ground between merely causal processes and full-blown rational states. This Sellarsian middle-ground is neither an abstruse topic in the philosophy of language nor a metaphysical error, but a precondition of the possibility of a cognitive science that is appropriately deferential to the hazards of the mind-body problem.

⁸⁹ Millikan (1984) explores the possibility of regimenting the case for notions (e.g. that of a 'proper function') that fulfill the role that 'pattern-governed behavior' has in Sellars' thought.

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