VERBAL BEHAVIORISM AND THEORETICAL MENTALISM: 
AN ASSESSMENT OF THE MARRAS-SELLARS DIALOGUE

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ABSTRACT. Sellars' verbal behaviorism demands that linguistic episodes be conceptual in an underivative sense and his theoretical mentalism that thoughts as postulated theoretical entities be modelled on linguistic behaviors. Marras has contended that Sellars' own methodology requires that semantic categories be theoretical. Thus linguistic behaviors can be conceptual in only a derivative sense. Further he claims that overt linguistic behaviors cannot serve as a model for all thought because thought is primarily symbolic. I support verbal behaviorism by showing that semantic categories are in the first instance teleological explanatory categories and consequently can be observational. And I show how theoretical mentalism can be maintained even though thought is primarily symbolic.

Wilfrid Sellars has proposed a theory of our ordinary conception of thought that seems in many ways to take what is best from all possible philosophical accounts of thought while leaving behind their major shortcomings. His theory consists of two major positions: (I) Verbal Behaviorism: Our thoughts, inner conceptual episodes, are like overt linguistic utterances and (II) Theoretical Mentalism: Our knowledge of our thoughts is analogous to that of scientific theoretical entities. More specifically, Sellars' Verbal Behaviorism includes the following theses: (1) Overt linguistic episodes are genuinely conceptual in an underivative sense that allows semantic categories to be applied to them in a primary way. The underivative character and primacy in question are, however, methodological or in the order of knowledge and not ontological or in the order of being; (2) Thoughts as inner conceptual episodes, thoughts-2, are un-
understood as such on analogy with overt linguistic episodes, thoughts-1. Theoretical Mentalism includes the following theses: (3) Thoughts-2 are like theoretical entities; (4) Thoughts-2 are hypothesized on the basis of observable events, in particular, silent intelligent human behavior; (5) Thoughts-2 are postulated to explain certain observable events, specifically, silent intelligent behavior, and their explanatory role is then extended to account also for the occurrence of overt intelligent behavior, thoughts-1; (6) Thoughts-2 are modelled on the characteristics of observable events and processes, specifically, thoughts-1, in a manner similar to the way scientific theoretical entities and processes are modelled on observable entities and processes. (7) We can learn to refer to these inner conceptual episodes, though theoretical, in immediate reports just as we do in the case of the imperceptible entities of scientific theories. Thus privileged access can be accounted for.

In Sellars' view this account of our ordinary knowledge framework (OKF) view of thought—the Manifest Image Account—has a number of advantages over its competitors, current and traditional. It allows for the inner conceptual episodes of classical rationalist and empiricist approaches without the problems of introspectionism and those associated with the argument to other minds by analogy. On the other hand, it accounts for the public character of thought without the reductionism of logical behaviorism and its rejection of the theoretical. And, finally, it provides for the conceptual truth-like character of claims about persons as intelligent agents so dear to the Kantians and to both the analytic and phenomenological traditions. But it does so without committing Sellars to an a-priori givenness about conceptual capacities, such that correction, refinement, and even replacement of our OKF views are out of the question. Put methodologically, Sellars' view of how we come to know about thought within OKF resembles the hypothetico-deductive processes of scientific reasoning. The failures of introspective-cum inductive accounts, deductive approaches à-la-the synthetic a-priori, and the narrowly empiricist approaches typified by logical behaviorism makes the Sellarsian account a natural one, if not the last recourse.

But despite all its cogency, Sellars' account has not gone unchallenged.[2] One of the most persistent and penetrating critics of his account of our OKF conception of thought has been Ausonio Marras. In a series of papers he has criticized Sellars' views both methodologically and substantively.[3] In this paper I want to take up his two almost recent challenges to Sellars' position neither of which have been as yet directly addressed by Sellars.[4] Marras initially criticized Sellars' account from a classical perspective arguing that Sellars' position is methodologically flawed because it either fails to account adequately for semantic discourse or is viciously circular in its account.[5] Thoughts-2, argued Marras, provide the bas-
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is in the order of knowledge for ascribing conceptual capacities to persons. In his most recent objections Marras has challengedSellars from Sellars' own scientific realist perspective, arguing that Sellars' account of semantic discourse is both methodologically flawed because it is, as it stands, logically behaviorist and substantively marred because its conception of the nature of thought is linguistic and thus fails to provide either empirically or theoretically for the symbolic but non-linguistic aspects of our conceptual capacities. I shall address each of these challenges in turn and offer a response which is, I believe, Sellarsian in spirit.

THE METHODOLOGICAL CHALLENGE

Marras contends that Sellars' account of semantic discourse is methodologically inconsistent and inadequate. It is methodologically inconsistent since it holds both that logical behaviorist tools are insufficient for developing semantic discourse and yet in its myth of the origin of mentalistic discourse provides the Rylean community with only logical behaviorist instruments. As a result they lack the means to develop semantic discourse. Consequently, the genius Jones who springs up in their midst is not able to go on, as Sellars myth would have it, to develop the notion of thoughts-2. Marras believes that this methodological deficiency can be made up by giving the Ryleans theoretical capacities and by allowing the introduction of the semantical as a theoretical mode of discourse. Thus Marras is arguing that Sellars must relinquish thesis (1) of Verbal Behaviorism. For in Marras' analysis semantical concepts cannot be in the first instance observational (non-theoretical) categories.

In response I shall concur with Marras' contentions that Sellars has rejected logical behaviorism and that the requirements for semantic discourse are beyond the capacities of those who employ only logical behaviorist tools. However, I shall argue that Marras is incorrect in his view that the development of semantic discourse requires that it be introduced at a theoretical level. I shall show that the Ryleans have adequate resources of a non-logically behaviorist sort for developing semantic discourse and do not need theoretical resources to introduce semantic discourse. As a result I shall maintain that Sellars account of semantic discourse is neither methodologically inconsistent because it rejects logical behaviorist analyses but provides its protagonists with only these tools. Nor is it methodologically inadequate because it provides them with insufficient tools for their task of introducing semantic discourse. Consequently, thesis (1) of Verbal Behaviorism stands, and given the arrival of the genius Jones, the development of theoretical mentalism is assured.
For our purposes we can use Marras' characterization of semantic discourse as discourse about the meaning and meaningfulness of expressions and about their truth, reference, validity, etc. And, following Marras, we will focus on ascriptions of meaning and meaningfulness. As is well known, Sellars has given a functional account of meaning. Sellars explicates

(1) "S" in L means p

as

(2) "S" in L is a 'p'

where 'p' is a sortal predicate that applies to items in any language which play in their respective languages the same role played in our language by the sign design that occurs between the dot-quotes.[7] Thus meaning statements are functional classificatory statements which assert that the utterance S in L belongs to the class of utterances 'in any language which play the role 'p' plays in the speakers' language (the basic language).

But linguistic expressions play roles because they are tokens of linguistic behaviors. Moreover, these linguistic behaviors exhibit semantic uniformities. And these uniformities themselves are related to semantic rules. What distinguishes these uniformities from mere uniformities, for instance, the fire-heat sequence, is that semantic uniformities are in some way caused by and appraised by semantic rules. There are two types of linguistic behaviors (and, consequently, semantic uniformities): (1) acts which are governed by ought-to-be rules (OTBR's) and (2) actions which are governed by ought-to-do rules (OTDR's).[8] The latter are linguistic behaviors performed intentionally with knowledge of the rules. So they are rule-obeying behaviors. The former are linguistic behaviors performed neither intentionally nor with knowledge of the rules though they are performed in accord with the rules. So they are rule-governed behaviors. The OTDR's have the form: "When one is in circumstances C, one ought to do A." And the OTBR's have the form: "It ought to be the case that when one is in C, one does A."

Given then that the meaningfulness of expressions is linked to semantic uniformities constituted by either rule-obeying behaviors or rule-governed behaviors, are the resources of Sellars' Rylean community sufficient to generate semantic discourse? At issue is the correctness of the first thesis of Verbal Behaviorism. Are overt linguistic episodes conceptual in an underivative sense? Marras' answer is in the negative. His argument, reconstructed, goes like this. When we survey their resources we find that the Ryleans possess descriptive, logical, modal, and prescriptive discourse. They lack semantical, theoretical and men-
tal discourse. Thus they can observe the correlations between environment (natural and social) and linguistic behaviors, between linguistic behaviors themselves, and between linguistic behaviors and other non-linguistic behaviors. In addition they can formulate causal regularities on the basis of these correlations, including counter-factual hypotheticals, and make predictions on their basis. Is this sufficient for the introduction of semantic discourse? Clearly, it is not. The Ryleans could define meaning contextually in terms of behavioral regularities, i.e., in terms of the stimuli and consequences which accompany verbal behaviors. But Sellars has rejected such a logical behaviorist approach as inadequate. Or they could define meaning instrumentally. Thus they could consider semantic concepts as summary ways of stating rules which themselves serve to organize the behavioral data by licensing certain inferences to be made on their basis. But Marras contends that authentically Sellarsian Ryleans could not account for semantic discourse in this way either. He offers three plausible reasons. First, Sellars has rejected the view that semantic statements are prescriptive. Second, Sellars is in general opposed to instrumentalism. And, third, such an intramentalist account would have adverse consequences for Sellars' account of thoughts-2.

Marras now brings the issue into sharp focus. Since Sellars has rejected the logical behaviorist account of meaning his Ryleans will not be able to claim that the connection between behavioral and semantical uniformities, between behavior and meaning, is an analytic one. It must then be synthetic. What is the nature of this synthetic relationship? In general, Marras claims, the behavioral uniformities serve as criteria for the making of semantic claims. As such the synthetic relationship cannot be an accidental one for then the behavioral uniformities would not have the consistency necessary for being criteria. Moreover, Marras correctly contends that the linguistic behavioral uniformities do not merely provide evidence for the confirmation of hypotheses about the meaning of linguistic expressions. Such a mere evidential sort of relationship would reduce Sellars' verbal behaviorist position to just good common sense or standard empirical procedure. A further requirement is that Sellars establish an explanation of why it is that observable linguistic behavior provides evidence for semantic ascriptions. Such an explanation would show why certain ascriptions of linguistic uniformities will have built into their meaning a semantic component. As Marras puts it "He [Sellars] does not merely wish to claim that observable behavior provides, as a matter of fact, an evidential basis for ascriptions of semantical characteristics: he wishes to provide an explanation of the fact, and thereby, show that this fact is, in some sense, built into the very 'logic' of such ascriptions."

How, according to Marras, does Sellars accomplish this?
He does so by exploring the relationship between semantic uniformities (the rule-obeying and rule-governed uniformities) and the OTDR's and OTBR's. As we have seen, in Sellars' view instances of meaningful linguistic behavior are causally related to semantic rules and as a result semantic uniformities differ from mere uniformities. The causal relationship is most clearly seen in the way OTDR's bring about linguistic actions through the intentional activity of linguistic agents knowingly following linguistic rules. With OTDR's, then, the causal relationship is, as Marras puts it, proximal. In the case of the OTBR's the causal connection is, on the first level of analysis, distal. For in the case of language learners, for instance, who follow the rules of a language unintentionally and without knowledge of the rules, the rules are causally operative via the selective reinforcement of the language trainers.

Given the above causal links between behaviors and rules, one final interpretive step leads Marras to his goal, the explication of the criterial connection between behavior and meaning. In the light of Sellars' scientific realism Marras believes that the distal causal connection between rules and the linguistic behaviors of language learners can be made proximal. For the learning history resulting from the selective reinforcement procedures must be interpreted realistically. The learning history constitutes a set of response habits, dispositions to say A in circumstances C when appropriate. And these response habits themselves can be encoded in the neurophysiological processes of the language learner. As such then the rules are proximally causative of the linguistic behaviors and their correlated semantic uniformities. The rules cause and guide the behaviors and, because of this, the behaviors constitute not merely behavioral uniformities but semantic uniformities. As a result the behavioral uniformities become criteria for the causal presence of semantic rules, either OTBR's or OTDR's, because the former are the causal consequences of these rules, postulated, in the case of OTBR's to be physically realized in the speakers and recognized to be operative in the speakers in the case of OTDR's. This interpretation allows us to understand Sellars' claim that as such the semantic uniformities logically imply linguistic rules, though they do not assert them. Thus Marras argues that the criterial connection between behavioral and semantic uniformities can be established by explaining theoretically the causal connection between rules and behavioral uniformities. Semantical discourse is a mode of theoretical discourse.

We can now see why Sellars' Ryleans are not up to introducing semantical discourse. For semantical discourse is in fact theoretical explanatory discourse. And we have seen that the Ryleans lack theoretical discourse as well as semantic discourse. According to Sellars the job of genius Jones is to introduce the theses of theoretical mentalism having gotten the notion that there might be something
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called thoughts-2 like thoughts-1 (Thesis 2 of Verbal Behaviorism) and granted that the Ryleans held Thesis I of Verbal Behaviorism. But now we find that Thesis I must itself be a theoretical achievement. Jones must be even more of a genius than Sellars recognized. He must introduce both theoretical and semantical discourse as well as mentalistic discourse. Marras sees two ways in which this might happen. The first is that mentalistic discourse could be introduced as a theoretical framework prior to the introduction of semantical discourse. Then the semantical characteristics of thoughts-2 could be used as a model to understand the semantical characteristics of linguistic expressions. As Marras puts it, "... speech would be perspicuously characterized as thought-out-loud, rather than thought being characterized as silent speech."[17] Marras, however, favors a second possibility, namely, that both semantical and mentalistic concepts were introduced together "as interrelated theoretical concepts within a single theoretical framework designed to explain intelligent and, in particular, symbolic behavior."[18]

What are we to say about Marras' argument? Clearly, Marras is correct that Sellars has rejected logical behaviorism.[19] In addition, I believe Marras is accurate in his general interpretation of the relationship between behavioral uniformities and semantic uniformities as being criterial in a strong sense that excludes a mere accidental connection between behavior and meaning and that requires something more than just the demands of sound empiricism. For it is precisely such a strong criterial connection that makes Sellars' verbal behaviorism distinctive. Sellars' brand of behaviorism is distinctive not only because it allows for mental entities and processes productive of behavior (thus separating itself from Skinnerian radical behaviorism and a narrow methodological behaviorism) but also because there is in Sellars' view something special about the observation base that founds theoretically postulated conceptual processes. (Thus Sellars' position, though liberally methodologically behavioral, because it allows for the realistic interpretation of postulated mental entities and processes, is distinctively linguistically behavioral.) Marras is also on track when he takes as a clue to the strong criterial connection the special relations that rules have to semantic uniformities as opposed to mere uniformities. And his account of semantic discourse gives us insight into Sellars' claim that semantic uniformities imply OTDR's and OTBR's. The uniformities imply the rules because the rules are causally implicated in the production of the uniformities and explain those uniformities. They are not merely exemplified by the uniformities.

Are we then to accept Marras' conclusion that such a causal explanatory role requires that semantic categories refer to the functions of theoretically postulated mental processes and that as a result Sellars must abandon Thesis I
of his Verbal Behaviorism, namely, that overt linguistic episodes are in a primary and underivative sense conceptual? I think not. For the logic of Sellars' argument is open to another interpretation and line of development. Briefly put, the strong criterial link between linguistic behavioral uniformities and semantic uniformities established by the causal role of rules in the production of the former can be explicated in the first instance teleologically. In the order of knowledge linguistic behavioral uniformities are not initially characterized as semantic uniformities because of the theoretical structure and processes postulated as their causes. Thus semantical categories are not in the first instance explanatory because they refer to these theoretically postulated structures and processes that are productive in a mechanistic fashion of linguistic behavioral uniformities.[20] My claim is, then, that semantic categories are explanatory not only in a mechanistic sense of causal explanation but also teleologically in the way that goals are explanatory. And because teleological ascriptions and explanations can occur at the observational level, semantic discourse need not in the first instance be theoretical.

On this interpretation, then, we can preserve Thesis I of Verbal Behaviorism according to which genuine conceptual properties can be ascribed to overt linguistic behavior. Nor need we conclude, as Marras would have it, "that in so far as the concept of meaningful speech can be (adequately if not fully) understood as a Rylean (pre-Jonesean) non-theoretical concept, then, in principle, he [Sellars] is acknowledging the adequacy of an account of linguistic meaning which is essentially indistinguishable from that of the logical behaviorist."[21] First, it is clear that verbal behaviorism is itself not only an incomplete but also an inadequate account of thought, even in OKF, since it must be supplemented by theoretical mentalism. Secondly, the entire OKF account including both verbal behaviorism and theoretical mentalism is in Sellars view inadequate and to be replaced, in principle at least, by a scientific account of thought based on psychological and neurophysiological theories. A logical behaviorist account of meaningful speech excludes these possibilities. But third, and most importantly, in so far as the concept of meaningful speech can be adequately understood as a Rylean (pre-Jonesean) non-theoretical concept, we can show that it can be essentially distinguished from logical behaviorist concepts. For we can distinguish the strategies of contextual definition and instrumental construal ascribed to the logical behaviorists from the teleological understanding of semantic categories which I am claiming is the authentically Sellarsian one. For under the first logical behaviorist strategy semantic categories are defined in terms of the observable causes and effects of linguistic behavior and under the second they represent inference tickets for drawing implications about these behaviors and their observable causes and effects. But the teleological specification of semantic categories
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involves the functional classification of linguistic behaviors according to ends explicitly or implicitly prescribed by semantic rules which specify the means for the attainment of these ends. The observational resources of the Ryleans are, I shall attempt to show, adequate to this task of teleological ascription and explanation. But the employment of such ascriptions and explanations to achieve semantic discourse in OKF does not involve the use of logical behaviorist strategies. Moreover, since such semantic discourse concerns in the first instance overt linguistic behaviors it provides the basis for ascribing conceptuality in a primary and underivative sense to overt linguistic behaviors. But since such ascriptions are part of the OKF framework they share its status, both its methodological primacy and its ontologically secondary position.

Moreover, though Marras rejects Sellars' claim that semantic discourse is non-descriptive and non-explanatory as obscure and unreasonable, under our interpretation the reasons for Sellars' claim are clear and well-founded. Marras finds Sellars' claim that semantic discourse is non-descriptive obscure because he can find only two possible sources for its non-descriptive character; but neither of these, Marras believes, even on Sellars' own view, render semantic discourse non-descriptive. The prescriptive discourse involved in semantic rules does not render the semantic uniformities and semantic categories of semantic discourse prescriptive and thus non-descriptive for, as we have seen, Sellars claims that semantic uniformities do not assert semantic rules though they do imply them and would not be true without them. And Sellars also denies that semantic discourse is non-descriptive because it derives from logical discourse. But it is puzzling that Marras has overlooked another possible source of the non-descriptive character of semantic discourse, namely, its functional character. Since semantic discourse does not classify linguistic behavior according to its physical or material characteristics but according to its functional attributes it is in this sense non-descriptive. Marras explicitly recognizes this feature of semantic discourse; but fails to note it as a source for the non-descriptive character of semantic discourse. It is the functional nature of semantic classification that enables us to see another important way in which semantic discourse is non-descriptive. For in so far as functional classifications involve teleological ascriptions and explanations, as I have argued they do, they involve a normative component. Thus they are non-descriptive.

Finally, since the connection between behavior and meaning is accomplished through the explanatory role of semantic discourse and since explanations are part of descriptive discourse, Sellars' denial of descriptiveness and explanatoriness to semantic discourse is, in Marras' view, irrational. Marras contends that the denial of explanatoriness is irrational because the very function of semantic...
discourse is to explain how verbal behavior relates to other verbal and non-verbal behavior and to the environment. The problem here, I think, is that Sellars intends to exclude only theoretical explanation from the functions of semantic discourse, at least in its primary and underivative sense.[26] But in so far as semantic discourse concerns overt linguistic behaviors, it is explanatory and thus descriptive but that explanatory function concerns teleological and observationally based explanations. Marras has, I believe, illegitimately restricted explanatory discourse to mechanistic explanation at the theoretical level.

That Marras has neglected the possibility of basing semantic discourse on observationally ascertained teleological ascriptions and explanations comes out clearly in his reply to an objection presented to him by Sellars in private correspondence.[27] Once the Ryleans are able to classify things (e.g., chess pieces) not only descriptively in terms of their physical characteristics but also functionally in terms of their rule-governed roles, then, so the objection goes, with the introduction of dot-quote common nouns they could classify meaningful linguistic expressions functionally in terms of their rule-governed roles in a particular language. Thus the introduction of semantical discourse requires only the application of the framework of rules and practical reasoning to linguistic behavior. However, Marras finds this objection unpersuasive for in his view it does not explain how the Ryleans who, indeed, were speaking meaningfully recognized that they were doing so. Thus Marras believes that the Ryleans might have introduced semantical discourse as an explanatory framework to explain their behaviors. Perhaps, he suggests, they used as a model for understanding rule-governed linguistic functions the roles of chess pieces and the rules of chess. The kind of explanation he has in mind, we have seen, is theoretical. Thus the functional characterization of chess pieces would serve as a perceptually ascertainable model for semantic discourse conceived as a theoretical framework.

But Marras' response has not eliminated the possibility that semantic discourse is an observationally based explanatory framework of the teleological sort I have suggested. Indeed, it is not at all clear why Ryleans are able to recognize the functional characteristics of chess pieces but not those of their own linguistic behaviors. The recognition capacities required for the former seem to be of the same sort as those required for the latter. Marras does not justify granting to the Ryleans the ability to recognize the functions of chess pieces and supposedly other things but not the capacity to discern the functions of their own linguistic behavior.

Let me now summarize my interpretation of Sellars and then, granting its plausibility as an interpretation, explore its plausibility as a basis for Verbal Behaviorism.
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In my view Sellars is claiming that behaviors can be identified observationally as rule-obeying and pattern-governed, that is, as semantic uniformities distinguished from mere uniformities. In the case of mere uniformities the causes and effects of linguistic behaviors are noted and correlated. In the case of semantic uniformities something else is noted, namely, that the linguistic behaviors occur because of certain consequences which they achieve. Functions and roles are recognized precisely because it is discerned that certain consequences are regularly achieved by these linguistic behaviors and that these linguistic behaviors occur because they achieve these consequences. Because of this the uniformities are semantical rather than merely causal, i.e., mere uniformities. The causal connection between rules and linguistic behavioral uniformities which render the latter semantic uniformities is explained in the first instance not by the theoretical postulation of the physical realization of these rules in response habits and neurophysiological processes which are causally productive of these uniformities. Rather, in the first instance the causal connection is to be explained in terms of the way the goals for the attainment of which the semantic rules make prescriptions function in the bringing about of the linguistic behaviors in question. The causal and regulative role of rules is in the first instance explained teleologically and observationally rather than mechanistically and theoretically.

Are such teleological ascriptions/explanations observationally ascertainable? One plausible set of conditions for goal ascriptions/explanations is as follows:

A behavior B occurs for the sake of a goal G, if and only if

(i) B tends to bring about G and

(ii) B occurs because (i.e., is brought about by the fact that) it tends to bring about G. [28]

Such ascriptions/explanations are distinctive because the ascribed behavior is explained in terms of its consequences rather than merely by its antecedents. And it is roughly this difference between explanations (both of the common sense and scientific sort) in terms of consequences and those in terms of antecedents that distinguishes teleological from mechanistic explanation. [29]

How do these ascriptions apply to semantic discourse? The goals incorporated into the semantic rules, whether they inform rule-obeying or rule governed behavior, are epistemic in distinction from the goals of communication and social praxis. [30] Classically, these goals have been specified as

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those of contemplation and deliberation. More specifically, Sellars discusses some of the functions concerned with meaning in terms of (1) world-word transitions, (2) word-word transitions, and (3) word-world transitions.[31] In other words, these functions are (1) information gathering, (2) information coordination, and (3) information use.[32] Though these goals remain the same as they inform rule-obeying behavior, actions, and rule-governed behavior, acts, their causal efficacy is mediated differently in each type of behavior. For, as we have seen, actions are the result of intentional activity based on a consideration of particular goals and norms and the means to achieve these goals. Acts, on the other hand, achieve their goals without such intentional activity. Their goal directedness is built in through learned response habits and concomitant neural encoding and/or genetically.[33] This difference between actions and acts leads us to distinguish two irreducible types of conceptual activity each attaining the epistemic goals of conceptual activity in a different fashion. Thus corresponding to the three above mentioned functions concerned with meaning we have two sets of conceptual activities, acts and actions:[34]

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<thead>
<tr>
<th>Function</th>
<th>Act</th>
<th>Action</th>
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<tbody>
<tr>
<td>Information-Gathering</td>
<td>Noticings-Out-Loud</td>
<td>Perceptual Search</td>
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<tr>
<td>Information-Coordination</td>
<td>Inferrings-Out-Loud</td>
<td>Problem-Solving</td>
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<tr>
<td>Information-Use</td>
<td>Willings-Out-Loud</td>
<td>Deliberation</td>
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Overt linguistic actions involve, implicitly at least, the evocation of epistemic goals, rules prescribing the attainment of these goals, reasoning about the means to achieve these goals, and intentions to do so. Though acts do not include these features, they can be elements of actions. Thus, for instance, noticings-out-loud, are part of a perceptual search. For example, I set out to find my keys by intentionally looking around but what I see or do not see is directly a function of what's there to be seen. Thus the corresponding linguistic actions and acts are distinguishable in terms of the way the epistemic goals are involved in their achievement. And these different manners of involvement are revealed by the different types of utterances which are associated with acts and actions, statements about goals, means, intentions to achieve same in the case of actions and the absence of such statements in the case of acts.

Granting that information gathering, coordination, and use are some of the functions constitutive of meaningful linguistic utterances and thus of conceptual activity and that these functions concern epistemic goals achieved by
rule-obeying and rule-governed behaviors, are these functions empirically discernible? In other words, can linguistic behaviors be discerned empirically to achieve results describable in terms of information gathering, coordination and use and can it be determined empirically that these behaviors occur because they achieve such results? If so, then the semantic category of meaning, and, to that extent, semantical discourse, is empirically based because it involves empirical goal ascriptions and explanations. And if so, linguistic behavior is meaningful because it tends to achieve certain epistemic goals and its occurrence can be explained because it tends to achieve these goals.

Let me take what I shall call the global case of epistemic functioning to illustrate that such goal ascriptions and explanations can be empirically given to linguistic utterances.[35] Jones expresses his concern that the chimpanzees are taking all the bananas. So, since he wants to save some for himself and Jonesella, he determines-out-loud that he must hide some. Reasoning-out-loud that the chimps are afraid of their pet parrot, he wills-out-loud to put the bananas in the box under the parrot's cage. Having done all this out-loud under the attentive eye and ear of his sister, he is observed by her to do exactly what he said he would. Jonesella, having observed on other occasions similar verbal and non-verbal behavior on the part of her brother, concludes both that his linguistic activity played a part in the information gathering, coordinating, and use and that his linguistic activity occurred precisely because it achieved the results it did, in particular, the stashing away of the bananas. The latter point comes home to her because she realizes that the series of linguistic acts do not normally continue to occur unless the perceived results are achieved.[36]

The key point to notice is that Jonesella arrives at her conclusions without invoking inner conceptual episodes which achieve the results in question. Now this, of course, is not to say that while noticing the silent activities of her brother she does not begin to speculate about whether and what is sometimes going on in his head. But when she—the long held secret concerning the real genius of the Rylean community must out—does that, "the something going on inside his head" is understood in terms of the functions of the linguistic utterances she has observed.

It seems plausible then to claim that the behavior uniformities governed by OTDR's and OTBR's are distinguished from mere uniformities, for example, Jones' parrot's constant parroting, "Don't ask me about the bananas, I'm clean." whenever anyone, chimp or human, enters the room, precisely because they are functional uniformities explanatory of the behaviors involved on the basis of the goals for the sake of which the behaviors occur. The OTDR's and OTBR's are normative formulations of epistemic goals and the
means to attain them. They constitute the semantic norms. Meaningful linguistic behaviors instantiate these rules and are governed by them. The semantic uniformities which describe the linguistic behaviors and explain them teleologically imply but do not state the semantic rules. For the rules are the normative expression of the type of goal-directedness that is required of linguistic behavior capable of meaning.

Thus the teleological account of semantic discourse posits an empirical link between linguistic behavioral uniformities and semantic uniformities. In so doing it also provides for the strong criterial connection between behavioral and semantic uniformities which Marras' analysis has shown to be necessary if Sellars' account of thought in OKF is to be distinctively behavioral and not merely empirically sound. But it does not require, as does Marras' interpretation of Sellars, that semantical discourse be construed as theoretical and thus that Sellars abandon the foundation of his verbal behaviorism, namely that overt linguistic behaviors are the primary conceptual items in the order of knowledge. On the other hand, the teleological reading of Sellars' position can incorporate Marras' analysis of the way linguistic rules are instantiated in response habits and encoded neurally and thus cause—in the mechanistic sense—linguistic behaviors, an analysis which I believe to be true to Sellars' account and plausible in itself. Moreover, teleological ascriptions are within the capacities of the pre-Jonesean Rylean community but, for reasons which as I have indicated, these capacities are not logically behavioral. Thus I believe that Marras' methodological challenge to Sellars' verbal behaviorist account of thought in OKF has failed. His account is not inconsistent since it does not restrict itself methodologically to giving only a logically behavioral account of semantic discourse while rejecting the adequacy of logical behavioral tools. Nor does it lack the methodological tools to provide the necessary link between behavior and meaning even though it does restrict itself to non-theoretical (observational) tools.

THE SUBSTANTIVE CHALLENGE

Marras also believes that verbal behaviorism is substantively defective and that in order to stand the test of both ordinary experience and scientific findings it must be modified. For Marras contends that it is clear on both the phenomenological and scientific levels that thought and speech are not equivalent. Put differently, persons have conceptual capacities which are non-linguistic. They possess non-linguistic symbolic capacities. Thus it seems to be incorrect to equate speech and thought in the sense demanded by the Sellarsian project, that is, that speech provides the model for understanding basic semantic characteristics which then are ascribed to postulated theoretical
processes, the inner mental episodes which we ordinarily call thought. Rather, at best, speech is one expression of our conceptual capacities which are primarily symbolic in nature. The following types of cases seem sufficient to make the point: (1) Children who do not yet speak seem to be able to think; (2) Deaf mutes and other impaired persons who cannot speak clearly do think; and (3) Some animals seem to have cognitive capacities even though they do not use language. These cases seem to demand either a rejection or modification of Thesis 2 of Verbal Behaviorism that thoughts-2 are like thoughts-1 and Thesis 6 of Theoretical Mentalism that thoughts-2 are modeled on thoughts-1.

A response to this challenge will, I believe, clarify and refine Sellars’ theses of verbal behaviorism and theoretical mentalism in some significant ways. For Sellars has made it quite clear that his thesis of verbal behaviorism does not entail that all conceptual activity be linguistic activity. Nor does he contend that all cognitive structures be linguistic. His position includes pre-linguistic symbolic structures and non-linguistic human and non-human symbolic structures. Are such admissions consistent with his verbal behaviorism and theoretical mentalism? I believe that they are. For linguistic behavior which serves as the model for understanding semantical categories can be considered as one type of symbolic behavior. Other types of symbolic behavior can serve as a basis for understanding semantical categories in at least some extended sense and provide the behavioral criteria necessary for the postulation of inner cognitive structures and processes. Thus the inner mental episodes, thoughts-2, postulated on the basis of rule-governed and pattern-governed linguistic uniformities and on the model of the semantic characteristics ascertainable from these uniformities constitute only one type of conceptual process that can be postulated. In general priority in the order of being belongs to what Sellars calls animal representational systems of which the human is one instance. The question we must now ask is whether this extension of verbal behaviorism and theoretical mentalism to what I shall call symbolic behaviorism and theoretical representationalism is really that or merely an ad hoc modification.

The basis of an argument that symbolic behaviorism is a legitimate extension of verbal behaviorism lies in finding plausible behavioral criteria for symbolic meaningfulness. The strategy for doing this is to argue that just as there are linguistic behavioral criteria, rule governed and pattern governed linguistic uniformities, for ascribing semantical features to utterances so too there are pre-linguistic and non-linguistic symbolic behavioral criteria for ascribing semantic features in some analogous sense to certain behaviors of children, impaired persons and animals. Consequently, just as an understanding of inner mental episodes, thoughts-2, is built on analogy with linguistic behavior, so
too an understanding of inner pre-linguistic or non-linguistic symbolic episodes can be built in part, at least, on analogy with pre-linguistic and non-linguistic symbolic behavior.[41]

To illustrate how this might be done, let us examine how the verbal behaviorist account of meaning as functional classification of verbal utterances can be extended to include other symbolic behaviors. Recall that in Sellars' view to give the meaning of a term or expression is to classify it functionally according to the following schema:

\[1\] 'S' (in L) means p is equivalent to

\[2\] 'S's (in L) are 'p''s

where 'S' is an expression in a given language and 'p'' is a functional sortal, which classifies 'S'.

This account of meaning can be extended to pre-linguistic and non-linguistic behaviors in the following way.[42] Let us take the simpler case to begin with, that of impaired persons, specifically deaf mutes. The claim would be that

\[3\] 's (in American sign language) are (or are similar to) 'p's

if 's play in ASL the same (or a similar role) to that which 'p's play in our language, assuming 'p's to be an expression in English. The truth of a claim that the roles are identical or similar depends upon the existence of behavioral uniformities which can serve as criteria for ascribing similarity or identity of roles. We can claim that such behavioral uniformities exist, if we find that 's play in ASL the same or a similar role as 'p's do in English for language entry, interlinguistic, and language exit transitions.

A similar set of requirements would apply in the case of pre-linguistic human behavior and non-linguistic symbolic behavior, animal or human. Thus

\[4\] ' (in Babyese) is analogously an 'p' and

\[5\] ' (in Chimpanzeese) is analogously an 'p'

would be justified if the 's and 's play in Babyese and Chimpanzeese respectively a role analogous to that played by 'p's in English. These claims would likewise depend on whether the behavioral uniformities are sufficiently similar to justify the claim that the symbolic behaviors are of the same functional type.[43]

It is important to notice how dot-quoting device is extended: (1) the semantic characteristics of the non-lin-
guistic symbolic behaviors are being modelled on those of the linguistic symbolic behaviors and (2) the particular semantic functions of the non-linguistic symbolic behaviors are understood, as are those of linguistic symbolic behaviors, in terms of a base language known to the user. But in (1) we are not using a model to build a theory. For both terms of the analogy are empirically available. The issue is whether the behavior of children, impaired persons, and animals are in certain instances sufficiently similar to the linguistic behaviors of adult normal language users to classify the former as symbolic. In other words, the paradigm of the symbolic behavior in OKF is the linguistic behavior of normal adult humans. It is their expressions which are characterized by semantical expressions such as meaning and truth in the primary senses of these terms. And to the extent that the behaviors in question of children, impaired humans, and animals are symbolic in this paradigmatic sense to that extent semantic characteristics can be applied analogously to these behaviors. Thus when we come to speak of postulated representational systems, for instance, animal representational systems, the semantical characteristics attributed to elements of that system are modelled on the semantical characteristics of the symbolic behavior of the animals in question which is itself understood on the model of the semantic characteristics of normal adult linguistic behavior. So, for example, Jonesella discerns that the invading chimps’ gestures are meaningful on the basis of their similarity with meaningful human symbolic behavior the semantical characteristics of which are themselves understood in the first instance in terms of meaningful linguistic behavior. And when the chimps act intelligently without all those gestures she gets the idea that they too might have inner symbolic episodes that are meaningful in the way that their overt gestures are. Indeed, these inner episodes may be the source of the chimps meaningful overt behaviors.

Thus I believe that Marras’ substantive challenge to Sellars’ account of the OKF conception of thought also fails.[44] The extension of Sellars’ theses to symbolic behaviorism and theoretical representationalism is a natural and legitimate one which allows one to account for the attribution of meaningful intelligent behavior to deaf-mutes, children and to some animals on the basis of the empirically ascertainable similarities of these behaviors with meaningful and intelligent human linguistic behavior as the paradigm of such behavior in the order of knowledge.

Marras’ challenge to Sellars’ account of the OKF view of the nature of thought, though ultimately unsuccessful, has played, I believe, an important role in underlining a central thesis not only in Sellars’ account of the nature of thought but also in Sellars’ philosophy generally, that is, the methodological primacy of OKF. For though Sellars holds firmly to a scientific realist stance and thus to the authority of what our best scientific theories tell us, he has
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nevertheless resisted the claims of those who find our OKF views to be mere theories eliminable as their inadequacies become apparent. Thus though our ordinary views of our conceptual capacities are not definitive, they play an important and necessary role in our quest for scientific understanding and explanation. As a result Sellars can claim both that "science is the measure of all things, of what is and what is not . . ." and " . . . that man is what he is because he thinks of himself in terms of this image (the manifest image)."[45]

FOOTNOTES


2. The locus classicus of an encounter of Sellars with a proponent of the primacy of thoughts-2 both in the order of knowledge and the order of being is with Chisholm in "IM." Compare David Rosenthal "Mentality and Neutrality," The Journal of Philosophy LXXXIII (1976), 396-415 for a penetrating critique of Chisholm's thesis on the irreducibility of intentional discourse. Julian Young in "Intentionality" Review of Metaphysics XXVI (1973), 696-722 has argued for a Chisholmian position against Quine and Sellars. I believe Young's conclusions against Sellars follow only if one equates, as Young does, the views of Quine and Sellars at strategic points. See Jay Rosenberg's Sellarsian critique of Quine in Linguistic Representations (Dordrecht, Holland: Reidel, 1974) Chapter IV. Bruce Aune has given a detailed examination from a Sellarsian point of view of how the categories of intentionality are applicable


5. See references in note 3 above.


7. Compare for instance, Sellars, SM, especially chapter III, IV and VI, 60-115 and 151-74, NO chapter V, 73-112, and "BLM."


11. Though I believe this is correct, we will need to explore further the relationship of semantic and prescriptive discourse.

12. What Marras seems to have in mind here is that for Sellars semantical statements are supposed to pick out genuine conceptual elements in overt linguistic expressions. But an instrumentalist account of such ascriptions would imply that overt linguistic expressions do not really possess semantic characteristics. As a result they could not serve as a model for thoughts-2. Thus Thesis 2 would need reinterpretation and Thesis 6 would fail.

13. Similarly, Edward Erwin has argued in his Behavior Therapy: Scientific, Philosophical and Moral Foundations (Cambridge: University Press, 1978) concerning the connections between cognitive behavior therapy and behaviorism that to call the former behavioristic implies at
most (1) a historical connection between the two, (2) some heuristic connections, and (3) the use of good empirical methodology in the construction and testing of theories. This claim overlooks, I believe, the role that the observation framework, in particular, behavior plays in the very meaning of the cognitive terms used by the cognitive behavior therapists. Compare my "Operant Learning and the Philosophical and Scientific Foundations of Behavior Therapy," Behaviorism (forthcoming).


15. Marras is particularly concerned with the physical realization of OTBR's and their causal role in the production of meaningful linguistic behavior. He believes that, for Sellars, linguistic acts are the basic meaningful linguistic behavioral units and that Sellars' attempt to show that linguistic utterances are meaningful rests ultimately on making clear how linguistic acts, rather than actions, are meaningful and thus how OTBR's govern linguistic behaviors. "Not all meaningful utterances, of course, are pattern-governed [rule-governed] responses. Some of them, as in the case of language trainers obeying ought-to-do rules, are deliberate linguistic acts in the sense that the speaker 'has the rules in mind' and deliberately uses them in producing his utterances. I shall not discuss this type of deliberate linguistic rule-obeying behavior as it does not constitute, for Sellars, the central core of meaningful linguistic behavior . . ." ("RMB," 172) [Emphasis Marras']. I have argued elsewhere ("Sellars on the Nature of Thought," [forthcoming]) that this analysis is radically incorrect and that it lies at the basis of Marras' charges in earlier papers, see note 3, above, that Sellars' account of the nature of thought is viciously circular.

16. Sellars, "IM," 530; "EMP," 179-80; "Particular linguistic configurations are correct or incorrect (in that they are subject to criticism) in a way which is illuminated by, although not defined in terms of, these general patterns or correlations" SM, 77. Compare SM 73-77; 82-86; 111-114 and NO 78083 for discussions of the relationships between semantic rules, semantic uniformities and behavioral uniformities.


20. Though Sellars, as far as I know, has not developed this line of argument, I believe it is Sellarsian in spirit. Thus "Theoretical reason is, I have argued in Chapter V, a structure of many levels. Each level has, as its basic skeleton, the statement forms and sequences of statement forms of truth functional and quantificational logic; yet, as I have indicated, these structures exist in an ambience of rules of criticism, which themselves belong to the domain of practical reason, qua concerned with epistemic values." SM 175. See his "Are There Non-Deductive Logics?" in EPH, 416-38, for an example of how Sellars accounts for inductive reasoning in terms of the epistemic goals of practical reason. Also compare "LTC," 98-101.
21. Marras, "BFSS" 674, (emphasis Marras').

22. "In view of my previous remarks, however, I find this view both obscure and unreasonable and I shall ignore it. I find it obscure because the alleged nondescriptiveness of semantical discourse derives neither from its being related to the prescriptive framework of rules . . . nor from its being constructible out of the resources of formal logic alone . . . . I find it unreasonable because if semantic discourse is not supposed to explain how items of verbal behavior relate to other verbal and non-verbal behavior and the environment, what then could be its function?" Marras' "BFSS," 672 fn. 9.

23. See note 16.


26. It is clear, it seems to me, that what distinguishes Jones from his Rylean colleagues is his use of theoretical explanatory discourse not the use of explanatory discourse as such. "We are now in a position to characterize the original Rylean language in which they described themselves and their fellows as not only a behavioural language, but a behavioral language which is restricted to the non-theoretical vocabulary of a behavioural psychology." Sellars, "EPM," 186 [Emphasis Sellars']. Even if we grant Marras his major contention that semantic discourse is theoretical, it remains that pre-Jonesean Ryleans can explain events, for instance, the causes and effects of behaviors observationally. Marras himself allows such observationally based explanations to the Ryleans: "And it is clear enough how these people [the Ryleans] may have engaged in logical reasoning--both deductive and inductive--about such behavioural uniformities and how they may have come to talk about them in terms of (overt) causes and effects and, counterfactually, in terms of (overt) propensities and dispositions." "BFSS," 668.


28. This is Larry Wright's modification of Charles Taylor's explanation of goal ascription. Compare Larry Wright, Teleological Explanations: An Etiological Analysis of Goals and Functions (Berkeley: University of California Press, 1976) 31-57 and Charles Taylor, The Explanation of Behaviour (New York: The Humanities Press, 1964), 3-25. The "tends to" formulation is used by Wright to include several different conditions: (a) B brings about G, or (b) B is the type of thing which brings about G, or (c) B tends to bring about G or (d) B is the type of thing which tends to bring about G. Though criticisms have been raised about the adequacy of this formulation and the related characterization of functional description and explanation offered by Wright, I do not believe they affect the major points of his analysis which I wish to use, namely, (1) that goal ascriptions and explanations are at times required for adequate descriptions and explanations and (2) in some in-
stances at least, these descriptions and explanations are empirically ascertainable. For the latter point compare Wright Teleological Explanations, 39-51, and Taylor, The Explanation of Behavior, 98-108. Berent Enc includes a concise critique of Wright's analysis as applied to functional discourse in "Function Attributions and Functional Explanations," Philosophy of Science 46 (1979), 343-65.

29. Teleological laws, both common sensical and scientific have the form \([S_i \cdot E_j \rightarrow B_k] \) where \(S_i \) are states of the organism including internal states, \(E_j \) are states of the environment, \(B_k \) are a range of behaviors and \(G_j \) are specific objects or states of affairs which the organism as a goal \(G \). Mechanistic laws, on the other hand, lack a reference to goals in their antecedents. They are of the form \([S_i \cdot E_j \rightarrow B_k] \). Compare Jon D. Ringen, "Explanation, Teleology, Operant Behaviorism: A Study of the Experimental Analysis of Purposive Behavior," Philosophy of Science 43 (1976), 223-53.

30. Sellars, NO, 73-75.

31. Sellars, "SRLG"; SM, 114; NO, 81.

32. The other major semantic category, truth, has as its epistemic goal, semantic assertibility, that is, the correctness of assertions as measured by the rules for correct assertions within a given type of discourse, e.g., factual, normative, logico-mathematical. Sellars develops an account of the semantic categories concerned with the exemplification of attributes and the reference of individual intensions as corrolaries of his thesis on the meaning of truth. Compare SM, 98ff.


34. The actions referred to are, of course, all overt linguistic episodes. Corresponding to these overt linguistic episodes, both acts and actions, the genius of the kylean community postulates inner mental episodes, both acts and actions. For the differences between actions and acts and how acts can be elements of an action, confer references in note 8 above.

35. A full account would need to address each of the functions of language that constitute it as meaningful and to consider the semantic category of truth.

36. Normality qualifications are unavoidable for a number of reasons. Compare paper by Enc referred to in note 26 above, 359-65.

37. Marras raises the first two cases explicitly in "RMB." I believe Sellars' account can also be extended to case (3). Compare "ME" and "BLM".

38. Sellars, "ME," 325.

39. Sellars' most recent and detailed developments are in "BLM" and "ME."
40. Sellars, "ME," 326.


42. Sellars lays the basis for such an extension in "ME," 328-38.

43. A similar strategy could be used for other semantical notions such as truth.

44. Marras contends that the admission of the symbolic into a Sellarsian account has radical consequences for some other Sellarsian doctrines, in particular, the rejection of concept empiricism, his position on givenness, and the intentionality of sensation (Marras, "RMB," 183). Though I cannot address these contentions here, let me indicate briefly some of my doubts about their plausibility.

Sellars sums up the essentials of concept empiricism as follows: "... the basic concepts in terms of which all genuine concepts are defined are concepts of qualities and relations exemplified by particulars in what is called 'the given' or 'immediate experience'". "Is there a Synthetic A-Priori?" SPR, 309. The view takes on two radically distinct forms: (1) The acquisition of such basic concepts is mediated by awareness of the qualities and relations exemplified by particulars. (2) The acquisition of such concepts does not require such awarenesses. Sellars rejects the former because the awareness is itself the result of conceptual achievement. He rejects the latter because in its account of the knowledge of linguistic rules necessary for the acquisition of such concepts it presumes knowledge of such concepts.

According to Marras' reading of Sellars, the latter's rejection of concept-empiricism relies on the thesis of psychological nominalism, i.e., the claim that the conceptual and linguistic are coextensive. Thus if Sellars must reject psychological nominalism, he will have to revise his critique of concept-empiricism. For he will no longer be able to argue that the development of concepts presupposes linguistic abilities. Further it would seem that such conceptual development is mediated by some kind of direct awareness. Thus the given reappears.

Though I cannot argue it here, I believe that Marras has misinterpreted Sellars' psychological nominalism. It does not identify the conceptual and linguistic. Rather, I believe, it is a way of asserting the paradigmatic status in the order of knowledge of meaningful linguistic human behavior for understanding both symbolic, but non-linguistic, behaviors as well as theoretically postulated conceptual abilities.

Marras also believes that the introduction of the symbolic threatens Sellars' thesis on the non-intentionality of sense impressions. Though I too have questions about that latter thesis, I do not believe that it is immediately threatened by the introduction of the symbolic as the more generic category of the conceptual of which the linguistic is a type. For with that introduction alone Sellars' distinction between sensation and conception stands.