

CONSCIOUSNESS

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ABSTRACT

An articulation of "consciousness" is offered which identifies this concept's relation to the subject matter of psychology as formulated within Descriptive Psychology. The fundamental move is to view consciousness as a feature of a certain class of behavior: self-cognizant action. The relation of "consciousness" to other fundamental behavioral concepts is then explored, most notably: awareness, attention, intention, self and self-awareness, "levels" of consciousness, deautomatization, persons, and language. Next, Jaynes' hypothesis on the evolution of consciousness is considered, and several consciousness-related abilities are discussed. Finally, the concept of "the *unconscious*" is briefly considered.

The concept of "consciousness" has as yet received little formal attention by Descriptive Psychologists. This is a conspicuous omission given the wide-spread rumor, allegedly perpetuated by William James himself, that consciousness is *the* fundamental subject matter of psychology. In the interest of developing a more explicit understanding of its relevance

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for behavioral science, I will offer a conceptualization of "consciousness" that locates this concept within the framework of the "Person Concept." What we will discover is that the early psychologists did well to identify consciousness as the fundamental subject matter of their discipline, given the unavailability of formal articulations of "person" or "behavior." However, in the absence of the latter concepts, the concept of "consciousness" has suffered from many ignominious articulations at the hands of both psychologists and philosophers. Although it may be of interest at a later time to review these previous approaches to "consciousness," I will limit my critical remarks here to a single sentence (which makes it all the more polemical): It is hopeless and categorically misguided to represent consciousness as an entity or substance, a force or energy, a brain process, an information-processing stage, a "mental element"—or as an object *of* consciousness.

I hope to show that consciousness, in its primary sense, is a *feature* of a certain logical class of actions, and that it is very closely related to the concept of "person." However, there is, unsurprisingly, more than one way in which the word "consciousness" is used, and I will accordingly discuss some of the other uses in the course of this article, and relate them to the one I see as primary.

Before beginning, it will be best to acknowledge that, given my limitations of space and understanding, I can offer here only the barest outline of what I take to be a workable approach to "consciousness"; many loose ends will be left dangling, others will not even be considered, and several of the analytic points I make will undoubtedly strike the reader as irksomely sketchy. At the least, I hope to have stimulated a systematic consideration of "consciousness" among Descriptive Psychologists.

CONSCIOUSNESS AS AWARENESS

The most general and straightforward sense of "consciousness" corresponds to the Know (cognitive) parameter of intentional action (Ossorio, 1973). As Natsoulas (1978) put it, "one's being conscious, whatever more it might mean, must include one's being aware of something" (p. 910). In this sense, any individual engaging in intentional action is conscious, and any state of affairs that he distinguishes is a content of consciousness. However, in order to keep the various senses of "consciousness" distinct, I will adopt the convention in this paper of speaking of "awareness" when I mean this general sense of "consciousness." ("Nonconscious awareness," then, rather than being a contradiction, will refer to Know values that are not conscious in the sense discussed in the next section.) The contents (objects) of awareness may be observed real-world objects, or images, thoughts, feelings, etc. In the present sense

of the word, awareness is not limited to persons: *Any* intentional actor (roughly, anything we would call an “animal”) exhibits awareness.

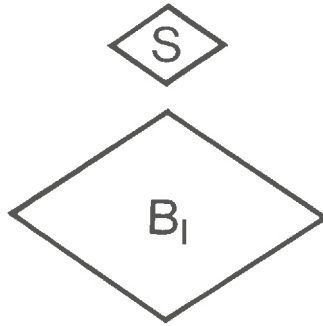
This approach makes it clear that awareness is not a force or substance—it is not locatable—but that “awareness” refers to certain facts about a certain logical class of activities: “Awareness” is logically dependent upon the concept of “intentional action.” The contents of awareness, at any given moment, are the states of affairs distinguished in the behavior which takes place. Any empirical study of awareness could hardly help being the study of the intentional action of individuals.

However, further thought about the above formulation suggests an exception: What about those instances of awareness that do not appear to take place during intentional action, such as dreams, or thoughts during meditation or mind-wanderings? Dreaming may be the clearest example: Surely we are aware of images during dreams, but dreaming is not normally considered to be an intentional action (there is no Want parameter). The solution, I think, is actually quite straightforward and rests upon the identification—not merely of a type of action—but of a type of *actor*. To see this, first consider an instance of a distinction connected to an activity that is *not* what we would call an instance of awareness (even in the present broad sense): a machine or computer responding to a certain input, or a rose closing its petals in response to nightfall. In the case of the computer, we might say that its “behavior” reflects Know, Know How, Performance, and Achievement parameters, but certainly not a Want parameter: That is, the computer as such is *never* (never qualifies as) an intentional actor, although it can make distinctions (Know), be programmed (Know How), run through procedures (Performance), and deliver outputs (Achievement). Correspondingly, we do not speak of the computer as literally *aware* of anything (ever). Hence, it appears that we have the following formal rule: The contents of awareness correspond to the Know values (whenever there *are* any) of the actions (intentional or not) of individuals whose history, paradigmatically, is a history of intentional action. This would include those individuals we know as human beings and other animals; it would exclude vegetables, minerals, and the inhabitants of the worlds of physics and chemistry, and the products of contemporary technology; and it would leave it as an empirical question whether or not it included certain borderline cases such as living sponges. In short, without intentionality, there is no awareness, even though there *can* be awareness without intention.

CONSCIOUSNESS

The concept of “consciousness” articulated in the present section appears to be the one that corresponds to that which is on the minds of

Figure 1 . Self-cognizant Action.

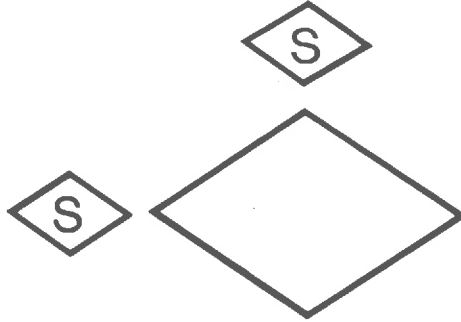


most psychologists when they speak of “consciousness.” Just as the concept of “awareness” articulated above was seen to be a derivative of intentional action, the concept of “consciousness” is a derivative of a somewhat more complex class of actions—that which Ossorio (1973, 1969/1978) has termed “cognizant action.” As a brief reminder, cognizant action is any case of intentional action in which the *concept* of intentional action is being acted upon (and thus one of the Know values is intentional action). However, to articulate “consciousness,” I will focus on a special case of cognizant action, which I shall refer to as “*self-cognizant action*”: an intentional action in which the person is distinguishing his *own ongoing* intentional action. (Note that to be distinguishing one’s own ongoing behavior does not mean or imply that the person is necessarily or typically *conscious* of his ongoing behavior qua behavior, in the sense of “consciousness” articulated in this section.) Self-cognizant action will be represented as shown in Figure 1, where the “s” stands for “self”, showing that this “s-diamond” in the Know parameter of the represented behavior (B_1) is the actor’s understanding of his own ongoing behavior.

Paradigmatically, the behavior that persons understand themselves to be engaging in at any given time is the one that they have *chosen* to engage in, hence self-cognizant action is paradigmatically deliberate action (Ossorio, 1973), in which “intentional action” appears in both the Want and Know parameters. Figure 2 explicitly represents self-cognizant deliberate action.

Every behavior has, of course, an indefinite number of correct (equally applicable) descriptions. The individual’s understanding (distinction) of his ongoing behavior corresponds to only one such description (for the moment, I am assuming his understanding is appraised as “correct” which is not necessarily the case; see below). One feature (parameter) of the behavior that a person understands himself or herself to be engaging in concerns the distinctions that are being acted upon—the Know parameter

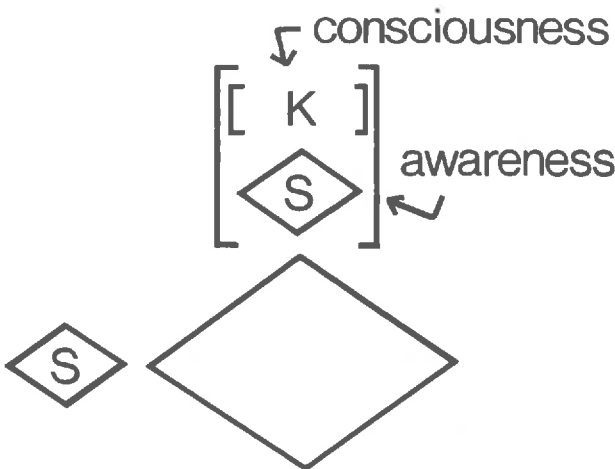
Figure 2. Deliberate Action.



of the s-diamond itself. It is the latter “second-order” Know parameter that I will identify as consciousness. This identification is illustrated in Figure 3. The values of the second-order Know parameter of self-cognizant action are the contents of what I am here identifying as consciousness.

There are two points that need to be made immediately concerning the above articulation. First, the above is not meant to imply that a person *takes* his contents of consciousness to be a feature of his ongoing behavior rather than a feature of his world; the contents of consciousness are, of course, normally experienced as features of the world. “The values of the second-order Know parameter of a person’s self-cognizant action” is an identification of the contents of consciousness, not an identification of the

Figure 3. Conscious Awareness as a Feature of Self-cognizant Action.



person's experience of the contents of his consciousness (which would involve a third-order Know parameter).

Second, note that the first-order Know values of self-cognizant actions are not limited to intentional action "descriptions." To the contrary, all higher-order Know values, whether or not they concern intentional actions, must also be first-order Know values, since all features of a behavior-description (including Know values) are also distinctions involved in the behavior of behavior-describing.

Third, I am well aware that the above articulation of the concept of "consciousness" corresponds to only one of several uses of the locution. Although it may very well be the case, I am not arguing that the presently articulated concept is primary or paradigmatic. What I am doing here is conceptual articulation, not conceptual analysis in the tradition of the ordinary language philosophers. Nevertheless, later in this article I will consider other concepts of "consciousness," especially those in which this term is used as a personal characteristic concept.

To return to my major point, I am identifying "consciousness" as a category term that encompasses those Know values of our self-cognizant actions which are features of that which we ourselves distinguish as our behavior. As such, the contents of consciousness are a subset of what I have earlier identified as the contents of awareness. Awareness encompasses all of the Know values of intentional action, while consciousness encompasses that sub-set that corresponds to the Know values of the behavior that we are *cognizant* of enacting. It is crucial to distinguish here and in the remainder of this article the concept of "cognizant of" from the concept of "conscious of." I am employing "cognizance" to refer to the first-order Know parameter (which necessarily includes all of the higher-order Know parameters), while "consciousness" refers only to the second-order Know parameter. Thus, when I say, as above, that the contents of consciousness correspond to those Know values which are features of the behavior we are *cognizant* of enacting, it should be understood that the cognizance of our ongoing behavior is generally taken to be nonconscious cognizance (i.e., non-second-order). That is, it is not paradigmatic that we are *conscious* of our ongoing behavior, but that we are cognizant of it—we nonconsciously distinguish or know it.

Another way to articulate the above ideas would be to say that the contents of consciousness consist of those distinctions which we distinguish ourselves to be distinguishing. (Again, this is not to imply that an individual who is conscious is necessarily *self-conscious*, since to be engaging in second-order distinguishing only requires that we are cognizant of our ongoing behavior, not that we are conscious of it; I will discuss below consciousness of one's self and/or of one's ongoing behavior). Notice that to be able to distinguish (be cognizant of) the fact of one's

making distinctions (which is an intentional action) logically requires that one has (a) a concept of intentional action (as distinct from mere performances and other nonbehavioral and nonintentional states of affairs), and (b) a concept of one's self as actor. These implications will be explored and expanded upon below.

To summarize so far, consciousness is here identified as the second-order Know parameter of self-cognizant actions. When engaging in a given intentional action, I am conscious only of those elements that are both (a) distinguished and (b) central to my behavior *as I* understand it at that moment. Included are those distinguished events whose occurrence are potential or actual disruptions of my ongoing behavior as I understand it (these will include surprises, mistakes, and other demands upon attention). Note that what counts as a disruption depends to some extent upon what I understand myself to be doing.

As an example of the distinction between conscious and nonconscious awareness, consider my behavior of writing the last sentence. At the time, I was most likely distinguishing (cognizant of; first-order Know values) my pencil, the pad of paper, the lines on the pad, the words and letters, the legibility of the words, the idea I wanted to communicate, the prospective audience, as well as the rustling of the leaves outside and the wind-chimes in the window, the pressure of my right leg resting on my left, and many other distinctions that were incidental or only functionally related to my behavior as I conceived of it at the time. However, the only distinction of which I was *conscious* was the idea I wanted to communicate and perhaps some global features of the prospective audience—since only these distinctions were of central relevance to my behavior as I understood it: *viz.*, clarifying how attentional demands fit into the present formulation. Many of the other distinctions (e.g., of the pad and pencil) were necessary for the successful execution of that behavior, but these were not in consciousness, since I was not distinguishing my behavior at the time as, e.g., “writing on a pad with a pencil,” although the latter would indeed be another applicable description of the same behavior (see below).

Heuristic Support for the Present Articulation

There are several heuristic bases for choosing the above articulation as an identification of the concept of “consciousness” (that is, when speaking of consciousness as a feature of behavior rather than as a personal characteristic concept, which will be considered below). Note that “heuristic bases” is not to be confused with “evidence” or “proof” that consciousness “really is” the second-order Know parameter of self-cognizant action. There is not a meaningful question as to what con-

consciousness “really is”; rather, the question is whether or not it makes sense to speak in the present fashion.

The first heuristic basis is the fact that, as illustrated in the above example, not all distinctions (first-order Know values) are conscious in the phenomenological sense. What we are phenomenologically aware of as the contents of consciousness must therefore be some subset of the first-order Know values. The present articulation provides an explicit and non-arbitrary means of identifying that subset.

Second, I have not been able to identify any contents of phenomenological consciousness that cannot be seen as second-order Know values of my behavior as I appear to have distinguished it at the time of the conscious contents in question. I have employed the following exercise. I think of an instance of a deliberate action in which I have recently engaged (for example, building a fire in the fireplace). Next, I ask myself (a) what I was conscious of at the time (e.g., the logs, their arrangement, wanting the fire to ignite effectively with one match) and (b) what I understood myself to be doing at the time (i.e., the description under which I had chosen that behavior). I then note whether or not the contents of category (a) can be seen as straightforward and sensible values of the Know parameter of the behavior described in category (b). Sometimes I may discover some contents of category (a) which at first do not have such a relationship to category (b). For example, I may note that I was consciously thinking about dinner while building the fire. But then I invariably recognize that my understanding of my behavior while building the fire, for example, was not just that I was building a fire, but also that I was planning a dinner at the same time (this was possible since building a fire is so routine; see below). Finally, I deduce what other distinctions I may have been making at the same time (e.g., the position of the grate, the dryness of the wood, the position of the damper, my own posture, the room temperature) and note whether these distinctions are as centrally relevant as the category (a) distinctions to my action under the description by which I chose it. They invariably are not. In general, such exercises have never turned up a content of consciousness that could not readily be seen as a second-order Know value.

A third heuristic basis for choosing the present articulation of “consciousness” is illustrated by the fact that in a single, relatively unchanging environment (e.g., a room of my house), the constant change of the contents of my consciousness appear to faithfully reflect the changes in the various behaviors which I choose (Want parameter) to enact at different times. (Recall that the behaviors that we choose generally correspond to the behaviors that we are cognizant of enacting.) When I choose different actions, I am conscious of different states of affairs (see below).

Fourth, consider the following case of non-self-cognizant action: sleep-

walking or dreaming. A person who is dreaming (assuming it is not “lucid dreaming,” which is an entirely different story; see below) is not conscious—not conscious of *anything*; he also does not know what he is doing (literally), although he is making distinctions (he is aware), and he is typically distinguishing behaviors other than his own at the time. The fact of his not being conscious of anything follows from the fact that he does not know what he is doing—indeed, he does not know that he is doing *anything*. Interestingly enough, that one extraordinary type of dreaming during which we *are* conscious of the dream’s content while it occurs (lucid dreaming), is, to my knowledge, unanimously identified by saying that it occurs when a dreamer becomes aware that he is dreaming (i.e., self-cognizant).

Fifth, it appears that the present articulation of “consciousness” is a more explicit version of many earlier formulations. For example, Natsoulas (1978), in his recent discussion of the fourth entry under “consciousness” in the Oxford English Dictionary, comments as follows:

One exemplifies consciousness, by being aware, or by being in a position to be aware of, one’s own perception, thought, or other occurrent mental episode. (p. 911)

As with the present articulation, Natsoulas’ involves a second-order awareness—awareness of one’s distinctions. Many other thinkers on the topic have spoken in such terms as consciousness being “an awareness of awareness” (see the review and references in Natsoulas, 1978). There is one possible implication of these formulations, however, that I wish to avoid. This is the implication that we are not directly conscious of real-world states of affairs, but only of “mental episodes” or awareness. Of course, we can and often are conscious of our thoughts, intentions, feelings, etc., but we are also conscious of real world elements and not just our “perceptions” of these objects. For example, when I look at the pencil in my hand and become conscious of it, I am not conscious of a “mental episode” of a pencil, but of the pencil itself. The present formulation of “consciousness,” as the second-order Know parameter of self-cognizant actions, does not remove us one step from the real world, but identifies which distinctions in awareness are consciously distinguished.

A seventh heuristic basis for choosing the present articulation of “consciousness” is the set of discussions found in the remainder of this article. However, in these discussions I will not primarily be arguing that the above articulation is heuristic. Rather, I will be simply *using* that articulation, so that whenever I use the word “consciousness” in the remainder of this article, I will mean this to be synonymous with “the second-order Know parameter of self-cognizant actions” (unless I say otherwise).

Thus, the remainder of this article is primarily concerned with the use and implications of the above articulation, not with its support. However, I believe these discussions will nevertheless be found to add up to a substantial body of indirect support for the proposition that it makes sense to speak of consciousness in this way .

ATTENTION

Attention'' is the word that we use when we are referring to awareness or to consciousness as a domain within a larger domain. The objects of awareness are the objects of attention, and the objects of consciousness are the objects of *conscious* ("central") attention. However, to speak of attention (or conscious attention) is different from speaking of awareness (or consciousness) since "attention" always implies a domain that includes the objects of attention as a subset. That is, to speak of P's attention is to indicate those features of a larger domain that P is discriminating, and thus "attention" is necessarily an observer's concept since it implies an observer, O, whose field of awareness (or consciousness) is (temporarily) greater than P's. However, relative to some other observer (or the same observer at a different time), O's field of awareness is simply O's attentional domain. [Thuš, when a given O wishes to contrast a possible set of distinctions from a subset of actual distinctions, he speaks of "attention."

Attention, Intention, and Behavior

Attention serves intention.

More prosaically, the contents of consciousness follow deductively from the behavior which we choose to enact. In particular, the contents of consciousness consist of elements (i.e., distinctions) which are central to the enactment of the (nonautomatized) behavior that is chosen (see the discussion, below, of "automatization" for instances of behavior in which the contents of consciousness do not include elements that are central to the enactment of those behaviors).

Thus, a change in intention (Want value) logically implies a coordinate change in attention (Know value), since only what is a value for the Know parameter can be a value for the Want parameter. Similarly, a novel value for Know provides the opportunity for a change in the value of Want. A change in the value of either or both, of course, constitutes a change in the action which the actor is described as carrying out, since the values of the Know and Want parameters are features of the behavior itself, not merely of states of affairs that precede and/or effect the behavior (Ossorio, 1973)

CONSCIOUSNESS OF INTENTION AND OF BEHAVIOR

Given the (analytic) fact that the contents of our consciousness follow from our distinction of our ongoing behavior which follows from our intention (our choice of behavior), it is of interest to note the empirical fact that we are very rarely conscious of *either* our ongoing behavior qua behavior or our present intentions to act. (We are typically *cognizant* of our ongoing behavior and intention, but not conscious of them). As an example, consider your own behavior of reading the previous sentence: It is highly unlikely that you were conscious of your behavior of reading (under any description) or of your intention to do so (although you were undoubtedly cognizant of both). Rather, you were probably conscious of what I was communicating, of the concepts to which I was referring, and/or of various points related to the one I was making. It is, of course, *possible* to be conscious of one's ongoing behavior and/or intentions, but it is neither necessary nor adaptive—and it is not particularly easy. Behaviors that require “full attention” (i.e., nonautomatized behaviors; see below) require conscious attention to the elements in relation to which we are acting and/or to the elements we wish to produce or acquire—not to the behavior itself or to the intention to behave. Indeed, a person who is overly attentive to his ongoing behavior per se is usually one who thereby trips himself up, and who we call “self-conscious”—he is observing himself as if from the outside. It is difficult to observe oneself act and to behave at the same time, with one exception: Interestingly enough, the class of behaviors which are easiest to perform self-consciously consists of those behaviors which can be performed entirely *non-consciously*—those “overlearned” behaviors which we can enact “automatically” without paying any conscious attention whatever to the elements in relation to which we are behaving. Examples are simple or routine movements like bouncing a ball, scratching an itch, walking, chewing, or even driving a car—anything that can be done “absent-mindedly” (i.e., without consciousness). However, it should not be surprising that this is so: it is a commonplace observation that there is a limit to the “capacity” of consciousness, and to be conscious of our own behavior qua behavior when that behavior is one which itself requires consciousness of its objects for its effective performance is often doing “more” than we are capable—hence, the often debilitating result of being self-conscious. (Parenthetically, there do exist “consciousness expanding” exercises, such as the Guirdjoeffian “self-Remembering” Technique, in which the goal is precisely to be conscious of one's behavior as one is performing it. Without taking the space to go into the rationale of these exercises in detail, we may at least note that persons who regularly practice such a

technique and improve at it will not only be expanding the range of their attentional capacities, but also enhancing their present-centeredness with no loss of spontaneity as long as they are being observers of their action and not critics.)

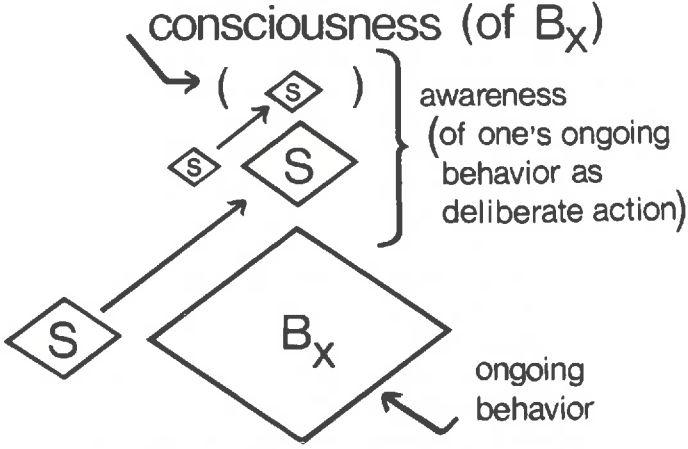
In short, action which is paradigmatically human is the sort in which the actor is cognizant of his action but not conscious of it. However, we must be a little more careful before saying that we are typically not conscious of what we intend: If the contents of consciousness are the second-order Know values of self-cognizant action, as shown in Figure 3, wouldn't that Know parameter have to, logically, include the *Want* values (and hence the intentions) of that second-order behavior? Well, yes and no. First, it is always possible for one to be cognizant of one's ongoing behavior under a simple, undifferentiated intentional action description, which would leave out specific reference to the *Want* parameter. Second, we must distinguish the *Want* parameter of an intentional action from that of a deliberate action: If one is cognizant of one's behavior as intentional action, then one may be conscious of *what* one wants (i.e., the values of the *Want* parameter of the second-order behavior) but not necessarily be conscious *that* one wants it or what one is doing to get it (i.e., the behavior which is the *Want* value of the first-order behavior). (The reader is again reminded of the distinction between "being conscious that" and "knowing that.") In this simpler sense of "intention," we *are* often conscious of our intentions. What we are rarely conscious of, however, is our *intention to behave*—to engage in a particular action. Indeed, it can be seen that to be conscious of that class of intention is logically equivalent to being conscious of one's behavior since the object of that intention *is* that behavior (see Figure 4). In other words, to be *cognizant* of one's action as *deliberate* action is to be *conscious* of one's *intentional* action.

"LEVELS OF CONSCIOUSNESS"

As pointed out earlier, when we are cognizant of our ongoing action, we are cognizant of it under only one (or perhaps a few) of the indefinitely large number of applicable descriptions of it. We choose to be cognizant of it in the way in which we do just as other observers choose the description that *they* give of our behavior. However, it is not quite the same sort of choice, in that how I choose to distinguish my behavior is logically dependent upon the way I choose to enact it. That is, in the case of deliberate action, my cognizance (first-order Know) of my behavior follows from the description under which I choose (*Want*) it, whereas, for any other observers, the way they see my behavior may have little or no relation to the way I chose it (*or* see it).

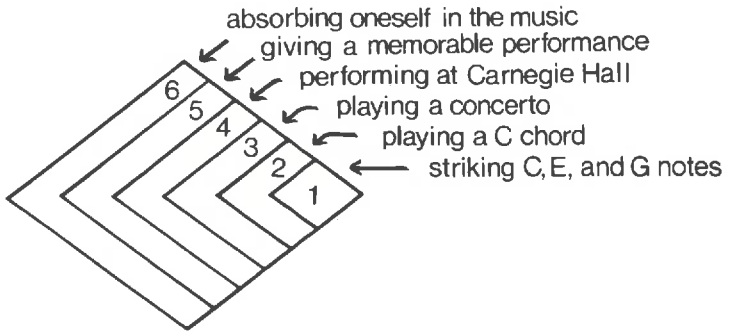
One of the dimensions of behavior description along which an observ-

Figure 4. Being Conscious of One's Intention to Behave.



er's description of my behavior may vary is the Significance parameter. That is, a given description of my behavior may be relatively "higher" or "lower" on the significance dimension than another description of it. Figure 5 shows a description of a behavior that includes five dimensions of significance. Any particular observer's description of that behavior may only be concerned with one of these five "levels" of significance. However, if we assume that Figure 5 is a correct representation of that behavior, then any description of it at any of the illustrated significance levels would also be correct (applicable). The interesting point, of course, when discussing "consciousness," concerns the significance level at which the actor himself is cognizant of his ongoing action. It appears that persons are typically cognizant of their action at any given time only on

Figure 5. Symbolic Action Description: Levels of Significant and Levels of Consciousness.



one significance level and very rarely more than three. At any rate, following the presentation above, we can see that the set of elements of which one is conscious follows logically from the significance level at which one is cognizant of one's ongoing actions. For example, referring to Figure 5, if one is cognizant of one's behavior at level 1, one would most likely be *conscious* of one's fingers and the piano keys; at level 3, one would be conscious of the melody and the music composition as a whole; and at level 5, one would be conscious of the audience, the feelings evoked by the music, and perhaps one's own virtuosity. Given that, for any typically human activity, there are several levels of significance on which a behavior can be described, and that the actor himself will typically "employ" only one of those levels, then at any given waking moment, there are several corresponding "levels" at which we can be conscious. Moreover, we should not be surprising to find that, for any given social practice (form of life; Wittgenstein, 1953), the relatively higher levels (up to a point) will tend to be associated with greater expertise, familiarity, sophistication, maturity, and complexity. In any case, the level at which one is cognizant of one's ongoing behavior will logically determine the sorts of elements of which one becomes conscious—the domain or level of consciousness.

The above should also make it clear how our intentions (our choices) "influence" our perceptions. Such mundane phenomena as persons being too preoccupied to hear or to understand what is being said, or persons misinterpreting instructions because of their expectations (both of which reflect choices of behavior which are incompatible with those of others) are instances of the "effect" of intention on consciousness. Moreover, any given real world element can be conceptualized and hence observed in numerous "correct" ways. The particular way in which we observe an element (i.e., the particular concepts we employ in its observation) will depend upon the way in which we are cognizant of our behavior, which depends upon the behavior we choose (which may depend, in turn, upon our cognized needs): "What a piece of bread looks like depends on whether you are hungry."

AUTOMATIZATION AND DEAUTOMATIZATION

Since the features of one's behavior that are only at significance levels below the level at which one is conscious are *nonconscious*, one could say that these performance features of behavior take place "automatically." The concept of "automatization" is from Hartmann (1958):

In well-established achievements they [motor apparatuses] function automatically: the integration of the somatic systems involved in the action is automatized, and so is the integration of the individual mental acts involved in it. With increasing exercise of

the action its intermediate steps disappear from consciousness. . . . not only motor behavior [Performance] but perception and thinking [Know], too, show automatization. (pp. 88–89)

Thus, for example, the virtuosos pianist, unlike the novice, is not conscious of the piano keys, his finger movements, or of the progression of chords *per se*. The development of expertise in any discipline would be expected to be accompanied by a change in the field of consciousness to a “higher” significance level. (I have placed the term “higher” in quotes since I do not want to imply a judgment of “better.” The “higher” significance levels are *literally* higher when illustrated as in Figure 5, but this is because they are actually descriptions of the behavior in question from *more extensive contextual frameworks*.)

Essentially, the concept of “automatization” reminds us that many behaviors that, in earlier developmental phases, were enacted self-cognizantly, later become non-self-cognizant performance-features of more complex self-cognizant actions. The concept of “deautomatization” was developed by Gill and Brenman (1959):

Deautomatization is an undoing of the automatizations of apparatuses—both means and goal structures—directed toward the environment. Deautomatization is, as it were, a shake-up which can be followed by an advance or retreat in the level of organization. . . . Some manipulation of the attention directed toward the functioning of an apparatus is necessary if it is to be deautomatized. (p. 178)

Deikman (1969) comments as follows:

Thus, deautomatization may be conceptualized as the undoing of automatization, presumably by *reinvesting actions and percepts with attention*. (p. 31, original emphases)

Deautomatization, then, would be a case of a person performing a given behavior and becoming conscious on a lower than normal significance level of that behavior, with the result being the “appearance” in consciousness of elements that had routinely been distinguished but not *consciously* perceived. Interestingly enough, one of the ways to accomplish this is to become conscious of one’s behavior *per se*, which, as we saw above, makes it difficult to engage in that behavior at the same significance level, forcing a shift of consciousness “downwards.” Another technique would be to focus one’s conscious attention on those elements which are central features of the behavior at the lower significance levels.

The goals of deautomatization, as discussed by Deikman, are (a) to counteract the tendency to perform given social practices in rigid routinized fashions, (b) to rediscover sensory qualities of observation, and (c)

to allow for a new sort of re-automatization—perhaps one that does not generate some of the difficulties of the previous automatization.

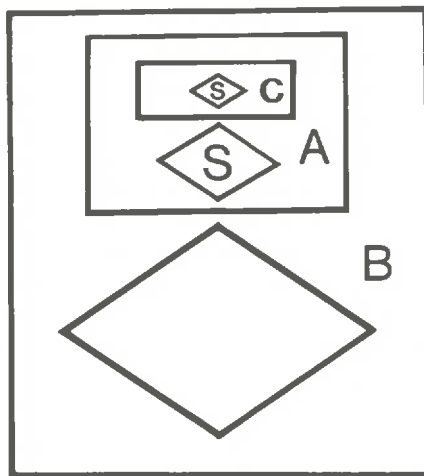
A LIMITATION OF SELF-CONSCIOUSNESS

Not only is it rare to be conscious of one's behavior qua behavior as it is enacted, it is also the case that it is *never* possible to be conscious of *all* of one's behavior in the following sense: Whatever consciousness one has of one's behavior, one cannot, logically, be conscious of that *fact* of consciousness. This can be more easily seen in Figure 6: One's behavior is represented by the contents of box B, and one's consciousness of one's behavior is represented by box C. Logically, there must always be more in B than in C, and thus one cannot be fully conscious of one's behavior while performing it. Moreover, since box A is less extensive than box B, one cannot even be fully *cognizant* of one's ongoing behavior.

Not Knowing What You Are Doing

There are at least two senses in which a person may be said to not know what he is doing. First is the case of non-self-cognizant intentional action, in which the person is not distinguishing his ongoing behavior under *any* description. Second is the case of self-cognizant action in which the actor distinguishes his behavior differently than does an observer—perhaps just on a different significance level; from the observer's perspective, the actor does not know what he is doing: They give significantly different, perhaps mutually exclusive, descriptions. This second category will in-

Figure 6. Limitations of Self-Consciousness.



clude, but not be limited to, those cases in which the actor takes himself to be engaging in a behavior for which, unbeknownst to him, he does not have the requisite know-how. Another case is that of "unconscious motivation" when an observer sees the actor as having intentions that does not fit within the actor's self-concept.

CONSCIOUSNESS AND PERSONS

Ossorio (1966, 1969/1978) has articulated a concept of a person in terms of an individual who engages in a particular class of action. However, there is some variability in Ossorio's treatment of the precise sort of action which characterizes persons. In some places (e.g., Ossorio, 1969/1978, p. 42), he says that it is intentional action. In other places (e.g., Ossorio, 1969/1978, p. 75 and p. 79), he indicates that it is deliberate action. An examination of the concept of consciousness suggests that the latter formulation is to be preferred since it allows for a coordination of the concepts of "person" and "consciousness."

When defined as an individual whose life history is, paradigmatically, a history of deliberate action, a person is ipso facto a conscious being (again, paradigmatically). This follows from the fact that deliberate action entails a cognizance of one's ongoing behavior, and, hence, consciousness. Conversely, an individual who exhibits consciousness is necessarily a self-cognizant actor, and, for all practical purposes, a deliberate actor. (It is hard to imagine an individual who would be self-cognizant but not make choices in terms of behaviors).

A related point is that to be a person or to be conscious, an individual must have a concept of intentional action, since otherwise he could not be cognizant of his own behavior. One implication is that the appearance of consciousness in the child should coincide with the child's acquisition of the concept of intentional action. Furthermore, the concept of "person" should be found to be acquired along with the concept of action and with the appearance of consciousness. Lastly, the developmental history of the concept of "self" should coincide with that of the above concepts since consciousness requires a cognizance of "*my*" behavior. Indeed, as Natsoulas (1978) points out, one of the earliest uses of "consciousness" referred to

. . . standing in a certain cognitive relation to *oneself*, namely, being a witness to one's own deeds, just as another person might be. (p. 910)

In short, without cognizant/deliberate action, there is no consciousness, no self-awareness, and no persons. One would, in fact, be justified in saying, then, that consciousness is the fundamental subject matter of

psychology, but it would be equally, and perhaps more, correct to say that it is persons or behavior (deliberate action). Most of the earlier approaches to consciousness can be seen as hopeless attempts to identify what is unique about human beings without the help of the concepts of "person" or "behavior"; not surprisingly, most "behavioral" scientists peered ever more closely at human *biology* in search of an answer. However, with a formal articulation of the concept of a person (Ossorio, 1966, 1969/1978, 1973), it can be seen that what is fundamentally definitive about human beings is not something to do with the fact of their being *homo sapiens*, but rather with the fact of their being persons. Many previous approaches to consciousness can be seen as categorically misguided attempts to identify consciousness as some sort of "emergent property" of human biology. Consciousness has been thought of as a "something" which when "added" to a human body produces a human being—hence, the hypostatizations of consciousness.

CONSCIOUSNESS AND LANGUAGE

Given Ossorio's (1969/1978) conceptualization of verbal behavior as $V <C, L, B >$, there appears to be no reason why consciousness, as defined here, would be required for the occurrence of language. Awareness (Know), of course, would be necessary, but not consciousness since the uttering of a locution (L) which is the performance of a verbal behavior (V), which in turn is an instance of a class of behavior (B) that consist of acting on concept C, does not require that the individual have a *concept* of behavior—only that the observer who characterizes the verbal behavior does. On the other hand, *human* language does presuppose consciousness, simply because the concept of intentional action is thoroughly embedded in the use of such a language. Thus, an individual who can intentionally employ human language must be one who has mastered the concept of intentional action, and, hence, as seen above, be paradigmatically conscious. The language of a nonconscious individual would contain no locutions whose meanings involved or presupposed intentional action, and thus would be an extremely primitive language compared to what we know. (Perhaps the language of bees is such a case; von Frisch, 1962.)

This does not imply, however, that all instances of human language-use require that the individual be conscious at the time. To the contrary, as long as the person is not cognizant of his own behavior *during* a verbalization, he need not be conscious even when employing language that includes intentional action concepts—that is, "action language." (For example, consider sleep-talking.) However, an individual who was never conscious would not have acquired action language in the first place since he would not have a concept of action.

A possible objection to this is found in the question: “But why could there not be individuals who have acquired a concept of intentional action but who do not apply it to themselves and hence who are not conscious?” A brief consideration of this possibility will show that it is incoherent. Such an individual could not conceive of himself as an actor. He would have no self-concept and would not know how to correctly employ first-person pronouns. Thus, if he spoke of action at all, it would have to be restricted to other individuals’ actions. (If he did not speak of action at all, he wouldn’t be a user of action language.) But how could it be possible for an individual to understand “he is doing X” without being able to say and understand “I am doing X” (or at least “I cannot do X”)? (Students of philosophy will recognize this as a peculiar variation of the “problem of *other minds*.”) It is not logically possible: If an individual can say “you are doing X” to another, he must be able to understand “you are doing X” when others say it to him. Furthermore, there *must* be others who say that of him if there are others who recognize him as an actor. If there are not any others who recognize him as an actor then he would never have acquired the competence to act in the first place, since he would never have been a participant in social practices (Maxim 7), and, hence, he could not have become a language-user.

In sum, consciousness is necessary for the sort of action language that characterizes human societies. Indeed, one of the major uses of language is for the expression of self-knowledge, which clearly requires consciousness as defined here. It is interesting in this regard to note Natsoulas’ (1978) discussion of two of the earliest concepts of “consciousness”:

the word *consciousness* did not always refer to the quintessentially private state or occurrence many now take consciousness to be. The word was used to characterize a kind of relationship between people, in which they were as confidants. (p. 909)

The next concept of consciousness from everyday thought is an adaptation to the individual of the [above] joint, or social, use. . . . consciousness can refer to standing in a certain cognitive relation *to oneself*, namely, being a witness to one’s own deeds, just as another person might be. (p. 910)

JAYNES’ HYPOTHESIS ON THE ORIGIN OF CONSCIOUSNESS

Readers who are familiar with Jaynes’ (1976) recent treatise on the origin of consciousness will recognize that the above discussion implies that Jaynes must be wrong—indeed, that his argument is incoherent. I believe that that is precisely what we must conclude. This is not to deny that he has written a fascinating book and integrated much extraordinary—if not controversial—data, or that he has made several discerning points about consciousness in his early chapters. Nevertheless, Jaynes’ central hy-

pothesis, that language (as we know it) appeared and was fully developed before the appearance of human consciousness, is logically untenable.

First, let us be clear that Jaynes' concept of consciousness corresponds—at least roughly—to that which is articulated in the present article. He begins by reminding us what consciousness is *not*: it is not a substance or entity such as the reticular activating system; it is not mere “reactivity”:

In writing, I am reacting to a pencil in my hand since I hold on to it, and am reacting to my writing pad since I hold it on my knees, and to its lines since I write upon them, but I am only conscious of what I am trying to say and whether or not I am being clear to you. (p. 22)

It is not experience; it is not what I have here identified as “awareness” since Jaynes points out that it is not necessary for concepts (distinctions), for learning, for thinking, or for reasoning (in the sense of choosing, decision-making, induction, deduction, recognition, and some other forms of problem-solving).

Later, he speaks of consciousness in a way that roughly corresponds to that which I will discuss below as the concept of consciousness as “real world”:

Consciousness is an operation rather than a thing, a repository, or a function. It operates by way of analogy, by way of constructing an analog space with an analog ‘I’ that can observe that space, and move metaphorically in it. It operates on any reactivity, excerpts relevant aspects, narratizes and conciliates them together in a metaphorical space where such meanings can be manipulated like things in space. Conscious mind is a spatial analog of the world and mental acts are analogs of bodily acts. (p. 65–66)

Although I would say there is some misleading language in this passage, it nevertheless shows that Jaynes sees an important relationship between consciousness and intentional action. Later, the fact that his concept of consciousness corresponds to the one employed here is seen when he speaks of his *pre*-conscious individuals as “noble automatons who knew not what they did” (p. 75)—non-self-cognizant actors—and even more to the point:

Man and his early civilizations had a profoundly different mentality from our own . . . men and women were not conscious as are we, were not responsible for their actions, and therefore cannot be given the credit or blame for anything that was done. (p. 201)

Thus, Jaynes' “bicameral men” were non-deliberate actors, but, never-

theless, were users of action language. As I believe I have demonstrated earlier, this is not a logically coherent possibility.

As a specific example from Jaynes' text:

The characters of the Iliad do not sit down and think out what to do. They have no conscious minds such as we say we have, and certainly no introspections. . . . The beginnings of action are not in conscious plans, reasons, and motives; they are in the actions and speeches of gods. To another man, a man seems to be the cause of his own behavior. But not to the man himself. When, toward the end of war, Achilles reminds Agamemnon of how he robbed him of his mistress, the king of men declares, "Not I was the cause of this act, but Zeus . . . so what could I do? Gods always have their way." (p. 72–73)

I suggest that we cannot take either Jaynes or Agamemnon seriously here. Agamemnon's response was a way of denying responsibility for his act (as well as an apparently acceptable manner of doing so—for Achilles and Homeric Greece) but the significant point to see here is that only an individual who could see himself as *eligible* to accept responsibility could be in a position to deny responsibility (otherwise there would be no need nor way to deny it). Hence, Jaynes' own quotation from the Iliad refutes the very point he is attempting to make. Moreover, Jaynes' assertion above, that individuals saw others as agents, but not themselves, is precisely the notion that we saw earlier to be incoherent.

In summary, there cannot be individuals who use action language unless there are individuals who are conscious, as defined here. Moreover, both require cognizant/deliberate action.

There is one further point to be made about consciousness and language: Given that all *intentional* actors are "language" users in the sense that all intentional actions are symbolic (i.e., all intentional actions are the significance of their respective performances), then it is not language *per se* that is unique to persons, but rather the concept of action, its use, and its implications for consciousness, self-knowledge, and *action* language. In other words, it is not merely language that becomes extraordinarily more complex with the evolution of cognizant/deliberate action, but *all* aspects of life. Thus, although it is not wrong to say that language (meaning action language) is what "separates man from beast," it is perhaps more to the point to say that it is cognizant/deliberate action or consciousness that does so.

Another popular misunderstanding about language is that it is what we use to create our reality, or the related notion that language shapes thought. However, without much elaboration, I believe that the above articulation makes it clear how (action) language, reality, thought, consciousness, and action all *reflect* one another; how they are all so many perspectives on a single domain of possible facts; how they all must evolve, develop, and change together—each one "pulling" the other if

not varying simultaneously. It is our action that creates the contexts (the social practices) within which there are places for the particular sorts of elements that together make up the real world that is codified and reflected by our language of action which, in turn, reflects the domain of possibilities that we can distinguish, ponder, and be conscious of. All cognizant/deliberate actors are ipso facto action-language-users (even if they are not speakers) and vice versa. The ability to use some form of action language is no different from the ability to *know* that one is doing X by engaging in performance Y: self-cognizant symbolic action. In this sense, verbal linguistic grammar codifies only one portion of symbolic competence. Furthermore, just as it is not possible to have (action) language without consciousness, it is not possible to have consciousness without (action) language. Here it is important not to confuse speech with language. What I am saying is (a) that to have consciousness an individual must ipso facto be able to represent to himself what he is doing, (b) that if he can represent this to himself there must be someone else to whom he can represent it, and (c) whatever means of representation he employs would count as an instance of action-language.

CONSCIOUSNESS-RELATED ABILITIES

In this section, I shall adopt the stance that American consumer-psychologists have taken vis-à-vis consciousness, and ask: What good is it, anyway? Who needs it? What does it buy me? (Mandler, 1975; Norman, 1976; Posner & Klein, 1973; Shallice, 1972). (Note Mandler's title.) In line with earlier sections, we can recognize that that which we could not do without ever being conscious will be the same as that which we could not do without cognizant/deliberate action. (A second related question I will explore below is: What sorts of behaviors can persons—who are, paradigmatically, self-cognizant actors—not do at all or as well non-self-cognizantly?)

The consciousness-related ability that seems to occur most often to psychologists is that of planning—in particular, planning courses of action. Naturally, one must have a concept of action in order to distinguish and choose among alternative courses of action. Without cognizant action, we could not make plans. Norman (1976) comments:

Some believe that conscious processes play a central role in guiding us through our activities. Conscious processes act at the highest level of decision making, initiating high-level operations and choosing between courses of action whenever there are conflicts (Shallice, 1972). . . . George Mandler (1975) argued that consciousness plays an important adaptive role for the human organism. He views it as a planning process, a mental "scratchpad" on which one can plan the possible results of future actions, allowing for more intelligent, reasoned choice than would be possible otherwise. (pp. 217–218)

The capacity to plan courses of actions corresponds to the features of consciousness that Jaynes (1976) has referred to as “the analog ‘I’”, . . .

which can “move about” vicarially in our “imagination”, “doing” things that we are not actually doing. . . . we imagine “ourselves” “doing” this or that, and thus “make” decisions on the basis of imagined “outcomes” that would be impossible if we did not have an imagined “self” behaving in an imagined “world.” (pp. 62–63)

Even more fundamental than the ability to plan, however, is the ability to know what we are doing. Non-self-cognizant actors may know the results of their actions, or may be aware of their movements and posture, but they cannot distinguish their actions as intentional actions—they cannot conceive of themselves or others as agents or doers. Accordingly, non-self-cognizant actors can have no concepts of self-as-actor, of personal responsibility, of morality, of justice, of duty, of freedom, of intention, or of reason. These and related action concepts (and their associated forms of life) can only appear with cognizant/deliberate action—with consciousness.

Self-cognizant action is also required for “internal dialogue,” for self-awareness, and for the role of critic:

Consciousness is closely coupled with the inner voice with which we “speak” to ourselves and which appears to analyze our experiences and our actions. . . . [Another] important aspect of consciousness is the state of self-awareness. By being aware of the courses of action that one is contemplating, there can be self-criticism and evaluation of the actions prior to their use. Similarly, while some activity is underway, or after it has been completed, this awareness allows for intelligent evaluation of the results and for suggested modifications for future actions. (Norman, 1976, pp. 217–218)

Jaynes (1976) speaks of an additional consciousness-related ability that he calls “narratization,” and that appears to correspond to our concept of the “self-concept”:

In consciousness, we are always seeing our vicarial selves as the main figures in the stories of our lives. . . . New situations are selectively perceived as part of this ongoing story, perceptions that do not fit into it being unnoticed or at least unremembered. More important, situations are chosen which are congruent to this ongoing story, until the picture I have of myself in my life story determines how I am to act and choose in novel situations as they arise. (pp. 63–64)

Another capacity related to consciousness is the experience of time. It does not appear too farfetched to suppose that the concept of “time” presupposes the concept of “action,” of “doing,” since the concept of tense—of past, present, future—is intimately bound up with action verbs. (Our action language is verbal in both senses of “verbal.”) It follows that a non-self-cognizant actor would be able to distinguish only here-now

elements. Perhaps this is the key to understanding (action) language as symbolic—in the sense of being able to *represent* states of affairs that are not here-now-present—in contrast to preverbal “signs” which can only *indicate* here-now elements and those “immediately forthcoming” (Langer, 1951).

The second question concerning the “usefulness” of consciousness involves the issue of what sorts of behaviors *persons* can enact non-self-cognizantly. The answer has been at least partially given in earlier sections: “over-learned” or habitual actions, and performance-level behaviors of symbolic actions. Behaviors that are not “automatized” require self-cognizance for their effective execution. There are one or two possible exceptions that come to mind but whose consideration would take us too far afield of the present discussion: namely, behaviors performed during at least some of the so-called “dissociated states” (Hilgard, 1977), and behaviors associated with self-deception (Fingarette, 1969).

CONSCIOUSNESS AS STATUS

A different, but related, sense of “consciousness” is often used to refer to the *domain* of which one is conscious in the above sense. This domain is generally referred to as the “real world.” The real world corresponds to the totality of elements that a given individual *could* be conscious of. This totality can also be referred to as “consciousness” in the sense of the domain of consciousness. This “personalization” of the real world follows from the analytic fact that an element is a part of an individual’s real world only by virtue of the empirical fact that it corresponds to a distinction that that person can make and act upon (see Plotkin & Schwartz, 1976). In this sense, “consciousness” corresponds to Ossorio’s (1969) concept of Knowledge: the totality of concepts and facts that a person can make and act upon. The relation between “consciousness” in this sense to “consciousness” as second-order Know values is analogous to that between knowledge and Know. To know another’s consciousness, in this broad sense, is to know his real world, or, better in this context, his relation *to* the real world—his place or status *in* the real world.

Consciousness can also be seen as a reflection of abilities: The set of elements of which we are conscious is limited by those actions that we are able to perform, those social practices in which we know how to participate—the contents of consciousness follow from the actions we choose to enact. A person’s consciousness, in both senses, is an achievement of his actions, just as is his real world. It is in this sense that one speaks of “expanding consciousness”—expanding the range of elements that can be distinguished, expanding knowledge, expanding abilities, or, most generally, expanding behavior potential.

This broad sense of consciousness is the one that Natsoulas (1978) refers to as “personal unity”;

According to the fifth OED entry, consciousness is “the totality of the impressions, thoughts, and feelings, which make up a person’s conscious being.” (p. 912)

This sense of consciousness can also be seen to be related to Jaynes’ (1976) concept of narratization, discussed above: narratization may be thought of as real world maintenance or as status-monitoring.

When we speak of “states of consciousness,” we are employing the term “consciousness” in the above sense of status or real world. Thus, a particular state of consciousness corresponds to a particular relation to the world (Plotkin & Schwartz, 1976). This is why it is not paradoxical to say that one of the states of consciousness is unconsciousness: This is to say that, at the time, the person is not acting upon *any* relation to the world—he is not self-cognizantly acting. In general, then, an *altered* state of consciousness is an alteration in the person’s perceived relation to the real world—a significant and temporary change in perceived status.

One last point about the domain of consciousness: It is, for the most part, equivalent to the domain of awareness. That is, those elements which can be distinguished are for the most part coextensive with those elements of which one can be conscious. There appear to be two sorts of exceptions, however. One set concerns the fact that it is possible to act on distinctions of which one is never conscious (e.g., some of the distinctions that infants act upon, which, by the time they become cognizant actors, are Know values only of behaviors that are at significance levels below the conscious level). The second set concerns the “repressed,” discussed below.

CONSCIOUSNESS AS STATE

A third use of the term “consciousness” involves a psychological-state concept in which “to be conscious” corresponds to being engaged in self-cognizant action. A person who “loses consciousness” is one who is temporarily ceasing to self-cognizantly act, and typically ceasing to act in *any* fashion since the behavior of persons is, paradigmatically, self-cognizant.

THE UNCONSCIOUS

There are several senses in which the term “unconscious” has been and can be employed. I will only suggest four of them, and only with the briefest articulations.

The first consists of those present contents of awareness (first-order Know) that are not also in consciousness (second-order Know).

The second refers to those contents of knowledge not presently acted upon.

The third sense of the unconscious, closely related to the second, is a peculiar way of speaking of an individual's personal characteristics. This is the "dynamic unconscious": the "place" that many psychologists suppose all sorts of fanciful thoughts, attitudes, energy exchanges, cathexes, and counter-cathexes are going on, "behind the scenes" as it were. The most peculiar feature of this "place" and these "goings-ons" is, of course, that there *is* no such place or such goings-ons, which is not to deny, for example, that persons have motivations that they are not presently acting upon. Rather, my point is that in every instance I have encountered that psychologists have spoken of the dynamic unconscious, it is easy to see that what they are talking about is simply *the person* and his personal characteristics: his dispositions, powers, status, and states. The temptation to speak of these features of the person as if they were hidden happenings appears to stem from two related states of affairs: (a) Since the concepts of "person" and of "intentional action" are largely foreign to contemporary psychology, psychologists find themselves with the need to account for human "behavior" solely on the basis of efficient (mechanistic) cause and effect. Furthermore, since efficient causes must be events (i.e., happenings), then the causes of human "behavior" must be sought in either visible or invisible ("internal") happenings. Final causes (intentions) and reasons are ruled out of place. (b) Since the notion of a *formal* cause is largely absent from contemporary "behavioral science," formal causes such as personal characteristics (e.g., attitudes, values) are thought of on the model of efficient causes. Thus, for example, if a person is expressing an attitude by his behavior, this must be due to something going on behind the scenes, unconsciously. The alternative, of course, is to see that behavior is the expression of the person whose behavior it is, not the causal effect of processes going on in his body or "mind."

(A related topic that I will have to save for a future paper concerns the issue of precisely what it is that a person is conscious of when he is attending to dreams, feelings, and/or "random" thoughts while, e.g., meditating or falling asleep. My answer will be that he is attending to *himself*, not to anything happening anywhere. Clearly, this will require further articulation.)

The final notion of the unconscious that I will mention is that of the "repressed." Once again, the metaphor of energy blockage may be avoided by simply referring to a portion of the domain of self-knowledge that not only lies outside the domain of the self-concept, but which is incompatible with that self-concept, and which, on that account, cannot become conscious.

NOTE

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