

The Intentionality of Retrowareness

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An instance of retrowareness is a veridical nonperceptual occurrent awareness of something or other about a particular past event or state of affairs. Accordingly, this occurrence is intentional, or exemplifies the property of intentionality, in the sense that it is as though it were about something (which it is, given the requirement of veridicality) in contrast to other equally intentional mental occurrences that only seem to be about something. That a retrowareness has intentionality must be explained, therefore, in terms of its own content and structure, rather than in terms of its success in being about an actual past state of affairs or event. Such an explanation will help us to understand both (a) how a retrowareness succeeds in being about its intentional object, and (b) how mental occurrences lacking an intentional object nevertheless may possess an intentional character.

To state the problem of this article I first need to spell out somewhat the two main concepts of retrowareness and intentionality. And since retrowareness is one kind of occurrent awareness, the latter concept too requires some explication. The import of the account I seek will then be sufficiently evident to proceed with my main task.

The Concept of Retrowareness

A major purpose of any science is to determine the nature of its objects of investigation. The contemporary practice of scientific psychology involves constant reference to various types of mental occurrences. And psychologists generally take a highly realist view of the mental occurrences they invoke. They hold that these occurrences transpire in people's brains and will eventually be described as objectively as any other part of the natural world (Sperry, 1980). Therefore, psychologists should be deeply concerned with the stream of consciousness (James, 1890), because all the mental occurrences to which they refer either (a) are literal components of the stream or (b) belong to a specific mental-occurrence type that includes such components as a subcategory.

Conscious mental occurrences are models for the mental occurrences

psychologists postulate as taking place outside consciousness. Retrowareness is one type of mental occurrence that constitutes the stream. Do instances of retrowareness also transpire elsewhere in the "psychical apparatus" (Freud, 1938/1964)? The present article gives no support to those who claim that no mental occurrence is instantiated without its owner's actual or potential direct awareness of it (Brentano, 1911/1973).

This article does suggest that the instantiation of a mental occurrence is, in all cases, a spatiotemporal particular existent (Bergmann, 1960). It is never merely an exemplification of an abstract property. Indeed, the stream of consciousness is "the most concrete thing for a psychologist." And this does not imply any sort of dualism of the mental and physical. Mental occurrences are dependent for their existence and character on the bodily organ of which they are an occurrent part.

Direct (Reflective) Awareness

The intact adult human being has direct (reflective) awareness of many (some theorists would say, all) the mental occurrences constituting his or her stream of consciousness. Direct (reflective) awareness means a component of the stream includes or is accompanied by its owner's immediate awareness of the component. Direct (reflective) awareness is immediate in the sense of not mediated by any other awareness. Just how much the owner grasps in this way about a mental occurrence is a further matter. Among other things, one cannot tell directly that one's stream is temporally continuous, that is, a continuous stream as opposed to a different kind of succession of mental occurrences (Field, 1983).

Yet all intact adult human beings can attest to instances of retrowareness in their stream. Could even Hebb (1981) have denied this—as part of his wholesale rejection of the mind's knowing directly any of its occurrences? Consider the following obvious example: my frequent retrowareness, over the last year, of the extraordinarily heavy rainfall in Washington, D.C. just as I was trying to leave after a visit there. And think of any other intact adult human being in my place. Anyone would have been changed by that difficult departure so that corresponding retrowarenesses would later occur when Washington, D.C. was mentioned and on other occasions. Of these retrowarenesses, their owner would be aware only by direct (reflective) awareness of them (Brodbeck, 1966).

Working Definition

For present purposes, the following definition of the concept of retrowareness will be adequate. *Whenever a retrowareness occurs which is part of a person's stream of consciousness, he or she has, thereby and therein, veridical nonperceptual*

occurrent awareness of something or other about a particular past event or state of affairs. Four comments are pertinent.

1. The terms "occurrent," "nonperceptual," and "veridical" require clarification or justification. A subsection is devoted to each.

2. A notable omission from the definition is reference to causality. Causality is clearly relevant in defining the concept of perceptual awareness. Is a retrowareness, too, what it is by virtue of how it is now caused to occur? A subsection addresses how a retrowareness is caused.

3. A notable though implicit inclusion is its being an objective matter whether an awareness is a retrowareness. That is, the latter *does not* depend on how the owner takes the awareness. This point becomes vivid upon realizing that the concept of retrowareness allows the person to take his or her retrowareness as anticipatory or prophetic. Veridically retroware of an event previously witnessed, one may think the event is only now about to happen perhaps just as one "imagines" it.

4. Framing the working definition in terms of the stream of consciousness may work to make the concept of retrowareness uncontroversial and acceptable to psychologists for their own use whatever their position toward retrowareness outside the stream.

Retrowareness Is Occurrent

Someone is retroware of a certain past state of affairs or event not simply in knowing it obtained or happened. A person is retroware of, for example, facts about the American Revolution not simply by being in an educated position to bring them to mind and disseminate them. Something more must occur if one is to be retroware of those facts though one "possesses" them no less while it does not occur. Compare: you are not visually aware of a certain attached or detached object unless the right kind of awareness transpires in you (Gibson, 1979). So, too, you are not retroware of a certain state of affairs or event if there does not take place in your psychical apparatus one or another retroawareness having the particular state of affairs or event as "intentional object"—which is to say, the psychical apparatus must make its owner occurrently aware of the past state of affairs or event.

Retrowareness must be distinguished from continuing mental states, which endure whether or not they are having effects or enter a condition of "activation." Through sleep, your knowledge of American geography persists though your psychological processes may be unaffected by this knowledge during that time. The "latency" of retrowareness (or any other constituent of the stream) stands in contrast to such inactive states: by not being another form of transpiring or existence. We may speak loosely of a person's "latent" retrowareness of this or that in the past. The sense is, however, that the person's psychical apparatus became modified so that it now has the specific

capability to produce, under certain conditions, the corresponding retrowareness or group of retrowarenesses (Iran-Nejad and Ortony, 1984). Often, the activation of knowledge that produces retrowareness is "reconstructive." The "constructed" retrowareness is not simply a version of the perceptual experiences that caused the respective traces to be laid down.

It should also be noted that activation of knowledge does not necessarily produce retrowareness. For example, the occurrent thought that the United States consists of fifty states is not a retrowareness, because it does not have a past state of affairs or event as its intentional object. Someone may counter that this occurrent thought is an awareness of a past state of affairs as much as of a present state of affairs. It is, of course, an awareness of a state of affairs that continues. But the occurrent thought is, quite properly, in the present tense, and it does not lack something in the present of which it is the awareness.

An occurrent mental state that fails to "hit a target" in the present may be a retrowareness if it is about a past state of affairs or event (and not perceptual; see next subsection). That is, "atemporal retrowareness" (Natsoulas, 1986) may occur. For example, a person seems to himself or herself to be fantasizing certain events to which, in fact, he or she was witness (Smith, 1966). That, in the past, of which one has retrowareness is not necessarily taken as in the past or in any other temporal location.

Retrowareness Is Nonperceptual

It is useful to keep separate the two categories of occurrent awareness called "retrowareness" and "perceptual awareness," although there transpire perceptual instances of occurrent awareness accurately described as awarenesses of something about a *past* state of affairs or event. For example, one may hear lightning already past; at the movies, one may see Charlie Chaplin perform an acrobatic dance; or one may see an already extinguished star whose light still arrives on earth. By definition, such instances do not qualify as retrowareness; no present purpose would be served by requiring that statements about retrowareness apply also to a certain subcategory of perceptual awareness.

All components of the stream are not externally determined; many are causally mediated by preceding components of the stream and processes in other parts of the psychological apparatus. In fact, talk of components of the stream succeeding preceding components may be an abstraction from a process expanding continuously in the dimension of time. When one has perceptual awareness of a state of affairs or event belonging to the surrounding environment or to one's body, this occurrent awareness may contribute to certain further mental occurrences that would not have otherwise transpired in one at the time. Although no retrowareness is a perceptual awareness, one way

retrowareness is evoked is perceptually. (Also, of course, many retrowarenesses are as they are—awarenesses of a certain past state of affairs or event—because the individual had perceptual awareness of that state of affairs or event in the past.) Thus, we look at another person, say, and our visual perceptual awareness causes to occur in us retrowareness of past states of affairs or events involving the person (or something else). And we seldom confuse the two, at least on the spot. We distinguish that of which we have perceptual awareness here and now of the person and what we are, at the moment, retroware of with regard to him or her.

Retrowareness Is Veridical

Except when qualified, the noun “retrowareness” and the verb “to be retroware” shall designate only veridical cases. Of course, nonperceptual occurrent awareness of past states of affairs or events is not always veridical. Some such awareness is about past states of affairs or events, but takes them as possessing properties different from their actual properties. For example, my present awarenesses concerning the parade that took place in downtown Davis last Fourth of July are nearly all veridical, except the UCD Marching Band did not participate. My present awareness of that past parade includes both retrowareness and what we might call nonveridical retrowareness. This adjective qualifies the concept, as does the prefix “pseudo” in a different though related way. A pseudoretrowareness is a nonperceptual occurrent awareness that *would be* of a certain past state of affairs or event if only this had obtained or happened.

Making veridical cases the main concern by means of a concept is familiar from our use of perceptual concepts. To say someone is perceptually aware of something about something is to imply the perceptual awareness is veridical. However, we may indicate or add explicitly that this particular “perceptual awareness” is in fact not veridical. Accordingly, what the perceiver seems to have perceptual awareness of is not really where it seems to be or does not have the property the perceiver seems aware of it as having. In using the concept of retrowareness, we may apply the same qualifications we apply in using the concept of perceptual awareness to characterize nonveridical or illusory cases.

How Is Retrowareness Caused?

Retrowarenesses have their intentional objects in the past. Retrowarenesses do not, like perceptual awarenesses, have their intentional objects among their causes that bring them about now. A retrowareness’s degree of causal independence from its intentional object goes even further. A retrowareness does not necessarily have in its causal history its owner’s witnessing the past

state of affairs or event of which he or she is retroaware. The owner may merely have heard about it. When one reads the day's newspaper, there is evoked in one, insofar as the stories are reliable, numerous retroawarenesses often concerning events of the previous day. Also, one may successfully reconstruct a past state of affairs or event on the basis of evidence. In such cases, the causal history of one's relevant awareneses may include no one as witness of the past state of affairs or event. The evidence on which the reconstruction is based may include no descriptions, at any distance, of the intentional object of the retroawareness. Furthermore, the futuristic possibility must be allowed that retroawareness will be evoked directly by brain stimulation. The less interesting members of this category of retroawareness would be indistinguishable from the retroawarenesses occurring naturally. The more interesting artificial retroawarenesses would be ones that could not otherwise occur given the person's history. Whether a mental occurrence is a retroawareness has to do not with how it is caused but with its own intrinsic character and a kind of correspondence between its content and the respective past state of affairs or event.

The Concept of Awareness

Awareness Makes Owner Aware

A retroawareness is an occurrent awareness. When any awareness occurs either the person is made aware of something or other or it is as though the person were made so aware. In the latter case, the person only seems to be aware of something or other. The world has not, so to speak, cooperated to provide the requisite intentional object at the right time or place or at all. By the intentional object of an awareness, I mean *that of which an awareness makes its owner aware if it makes its owner aware of something*. For example, dream awareneses often have no intentional object since they do not make their owner aware of anything (except themselves, insofar as there is direct, reflective awareness during dreaming). The, as it were, "dreamed of" states of affairs or events often have never been part of the world. However, a dream awareness is always *as though* it had an intentional object; and it normally fools the dreamer in this regard. It does so because the dream awareness has content just as the awareneses that do possess intentional objects have content. Having an intentional object is an external relational matter, whereas content is a necessary dimension of every awareness itself.

Whether or not an awareness has an intentional object, it does "make its owner aware." By so expressing the point, I do not imply a causal relation between the person and his or her stream of consciousness, as though the occurrence of an awareness of *x* produces the event of its owner being aware of *x*. The person being aware of *x* is equivalent to the occurrence in his or

her psychological apparatus of an awareness of *x*. This applies even where the awareness is nonconscious, that is, when the person does not have direct (reflective) awareness of it. It is not as though someone else, *another self*, were therein made aware. Always it is *the person himself or herself* who is aware; though if nonconscious awarenesses do take place, the person is not always wittingly aware.

Awareness versus Responding

I shall consider a fundamental argument against nonconscious awareness. First, let me say how awareness differs from merely responding. Awareness is a cognitive occurrence wherein, in veridical cases, something truly about something comes somehow to mind. Awareness of something is a mental apprehension or grasping of it, not simply a matter of responding to it or to something else (e.g., stimulation) connected with it. To respond to something in the environment or body is not necessarily to have awareness of it. Awarenesses are neither responses nor do they occur every time a response occurs. However, some forms of behavior require awareness among their causes. The performance of *actions*, that is, the deliberate production of behavior, must involve awareness of it (and its circumstances) before the behavior occurs. This is not to say one does not have awareness as well of one's involuntary behavior. Rather, awareness does not enter proximately in the production of such behavior. "Proximately" is meant to exclude cases in which one submits oneself to stimulation that will cause one to behave involuntarily.

An awareness of something classifies the latter, brings it under a heading, if only the heading of something that just occurred, or simply a heading like "this." Some authors have held a part of being aware is having immediate cognizance of so being. For such authors, the concept of being aware (mentally grasping the presence of something or a certain fact about something) makes no sense if the reflexive dimension of the concept is cancelled. They say such things as "What kind of awareness of something would I have if I did not know I was having it? It would be no awareness of mine at all—and no awareness." If awareness brings to mind something about something, then there is a subject aware of it. "It" here is not only something about something but also the awareness's occurrence, the occurrence that brings it to mind. So goes the objection.

No attempt is made here to resolve this issue, but acknowledging the issue has its functions. (a) For one thing, it contributes to the contrast between being aware and responding. Without narrowing the psychologists' sense of "respond to," I do not believe anyone would argue one must be cognizant of so doing in order to respond. Yet, awareness seems naturally to suggest reflexivity; and the burden seems to lie with those who propose awareness can occur outside consciousness. (b) For another thing, bringing the issue

up makes it clear there is dual content to many if not all instances of awareness, or two dimensions of cognitive content: that is, the individual is aware of something about something, which may have to do entirely with matters independent of the individual; and also, the individual mentally apprehends, in this instance, his or her own being aware. I return to this point in the next section.

Retrowareness versus Responding

A retrowareness makes its owner aware of something or other about one or another past state of affairs or event; delusional, illusory, or erroneous awareness of the past is not retrowareness, by definition. Therefore, behaviorist psychologists will propose that to be retroware of something about a past state of affairs or event is to respond in its absence as one responded to it earlier (Skinner, 1976). Accordingly, what gives us continuing access to the past (parts of the past) is *behaving as we did before*. Except for the past's present behavioral effects upon us (and other changes in our body), the past is lost to us. Of course, we have a variety of ways externally to record or represent past states of affairs or events; however, these means of access to the past would be interpreted as also a matter of causing us to respond as we did or would have responded to the respective past state of affairs or event.

In reply to the behaviorist psychologist, I would say (a) we are constantly responding in ways, often complex ways, we responded before. Also, (b) compare your retrowareness of a past state of affairs or event with actually responding now as you did at the time to that part of the past. You may notice, after you have responded, that you have behaved in the same way as you did earlier. But what if you do not notice: What if no retrowareness occurs? You merely respond in the same way as before with no reference to the past state of affairs or event. Would doing as you did before *tout court* constitute retrowareness of the past state of affairs or event that previously served as the occasion for your behaving as you are now behaving? Surely, something different is involved in retrowareness than responding as I have described.

Problems of Aboutness

However veridical or richly informed an awareness may be, can it be *about* the past if its possessor has no cognizance of it as such? For example, suppose one has a vivid imaginal experience of something that actually happened; suppose, as we say, one can almost see the past situation developing as it originally did. However, suppose as well that one takes this present awareness to be simply an imagining of how things could have been. Would this awareness qualify as a retrowareness?

When one has very much the same perceptual experience as before (e.g.,

one sees another person's face for the hundredth time), there is no temptation to consider a later perceptual awareness to be a retrowareness of an earlier state of affairs. Therefore, how would resemblance succeed in making a retrowareness be about something in the past? Suppose, for example, I have a thought out of the blue to the effect that an athlete will handily clear a high obstacle. Is this thought a retrowareness simply because I am not now watching a competition, as I was yesterday, and my present thought is quite like the corresponding one of yesterday?

The Concept of Intentionality

Intentionality and Having an Intentional Object

I have applied the concept of intentionality to retrowareness several times; for example, when I defined retrowareness as a category of mental occurrence about one or another past state of affairs or event. Thus, I implied all retrowarenesses are intentional mental occurrences; they each exemplify the property of intentionality. (Perhaps it is better to characterize them as "intentionive," but this is an unfamiliar adjective; therefore, I shall rely on the reader to keep in mind that the present sense of intentional mental occurrence, intentional object, and intentionality has nothing necessarily to do with doing something "on purpose" or intentionally.) Assuming some are not intentional, only those mental occurrences that are intentional can be about something, can have an intentional object. However, a mental occurrence exemplifying intentionality does not ensure, as one might have thought, that it has an intentional object. Does intentionality at least make having an intentional object more likely than not? The answer depends, in part, on the proportion of our stream of consciousness that is about states of affairs or events that constitute the actual world. Before I discuss further the relation between intentionality and having an intentional object, let me briefly address what intentionality accomplishes by virtue of retrowarenesses exemplifying it.

The Past Supplies Current Intentional Objects

Between a mental occurrence and the past state of affairs or event that is its intentional object, there is frequently a wide temporal and spatial separation. This does not prevent the current segment of a person's stream from, as it were, dwelling on what is no longer the case. In turning the stream of consciousness from present situations and events to ones in the past, we do not usually encounter any large obstacle to overcome. I realize the latter statement is a controversial one for psychologists whose scientific efforts concern deficiencies of memory. I do not mean to downplay the many exceptions to my statement; indeed, people suffer a massive amnesia with regard to much

of what they have experienced, and they cannot reconstruct a very great many of the past states of affairs or event that they have themselves witnessed. Psychologists who would take issue with me would be correct. A psychologist should remain constantly alert to people's failures to have retroawareness about so very much of their past. At the same time, the undeniable fact is that intact adult human beings can easily become occupied with the past and a good portion of our stream consists of retrowareness. This, too, is an important fact about us that psychologists should not forget or play down. Our power of retrowareness is a tremendous gift not diminished in its significance for our lives by its limitations.

Functions of Retrowareness

For one thing, retrowareness has an esthetic and consummatory dimension. It enables us to draw present satisfaction from states of affairs past, long past, and the like of which we will never enjoy again firsthand. In this way, retrowareness surely affects what we do next. Also, it can be shown retrowareness affects what we do very directly. Let me set the stage with some strongly analogous comments about perceptual awareness.

Contrary to some psychologists' predilections concerning the explanation of human behavior, human beings happen not merely to respond to situations. If we know anything about them, we know *human beings take action*. They *base* their behavior on, among other things, their perceptual awareness of their situation and their place in it (Mischel, 1975). That is, human beings *choose* among a number of behaviors available to them to perform. Their choices *take into account* such highly relevant matters as their having, at this moment, certain perceptual awarenesses. Human beings choose their behavior for *suitability* to their purposes and to the perceived circumstances. This means they consult their stream of consciousness concerning the perceptual awareness it contains. Accordingly, simply being perceptually aware of this or that, the sheer fact of having certain perceptual awarenesses, *cannot suffice for action*. In order to *base* our behavior on what we perceive, we must apprehend our perceptual awarenesses. *That* we are having perceptual awareness with this or that content *enters essentially into our choice of behavior to emit*.

We often base our actions also on what we are retroware of as having taken place when we previously took the same sort of action (e.g., in this room with the same people who are here now). The present situation does not *evoke* that behavior. The behavior depends on our consulting the past by consulting retrowarenesses in our present stream of consciousness. In many cases, that is, we do not simply respond to like situations with like behaviors; rather, we choose to do the same because of how we are retroware of a previous time when we faced the same situation. Such action depends on our intervening, so to speak, in the present situation's effects upon us. And given a still

further consideration that comes to mind, we may decide to do *something different* from what we are retroware of as having worked once before in this kind of situation.

Let me add to this that retrowareness is also useful to present action by bringing to mind parts of the present situation that are perceptually hidden from our present point of observation. Specifically, retrowareness may make available to us how those hidden parts appeared to us when we previously had perceptual awareness of them. Often, taking for granted that nothing has changed, we will act on the basis of nonperceptual awareness of the present situation (along with perceptual awareness). This nonperceptual awareness may well be retrowareness of certain now hidden aspects of the present situation as they existed before.

Contrast to Nonintentional Mental Occurrences

The described function of retrowareness and perceptual awareness in the determination of action would not be possible if they lacked intentionality. Because mental occurrences exemplify this property, they may have intentional objects. Lacking intentionality, retrowarenesses would not be what they are—veridical nonperceptual occurrent awarenesses of something about a past state of affairs or event. They would not be instances even of pseudoretrowareness. They would be nonintentional mental occurrences.

Occurring as part of the stream of consciousness, a nonintentional mental occurrence can be itself the intentional object of direct (reflective) awareness. (I assume that at least some instances of direct, reflective awareness are distinct from the mental occurrence each is about.) A nonintentional mental occurrence can be an intentional object of awareness. However, its being an intentional object does not go toward its being intentional, any more than an external event or state of affairs acquires intentionality in being an intentional object of perceptual awareness. The contribution to mental life that a nonintentional mental occurrence can make as intentional object is restricted by its own lack of intentionality. It does not have the kind of content that its owner can mentally apprehend *in such a way as* to be consciously aware of that which the mental occurrence makes its owner aware of. For, of course, a nonintentional mental occurrence *does not* make its owner aware of anything, on its own, let alone consciously aware of it.

Two Further Categories of Intentional Objects

The present article's main concern has required repeated reference to past states of affairs and events as intentional objects. I also mentioned present and future states of affairs and events as playing the same role. Direct (reflec-

tive) awareness, too, was briefly discussed; some awarenesses have as their intentional object a component of the stream to which they belong. To this list, let me add two further categories of possible intentional objects, thus indicating what intentionality may further accomplish.

1. A retrowareness may have an intentional object that is part of the same stream. The past event of which one is retroware may be an earlier component of the stream. Such retrowareness will usually be combined with or accompanied by retrowareness, pseudoretrowareness, or nonveridical awareness of external circumstances that obtained at the time. For example, a person may be retroware of the particular thoughts and feelings that constituted his or her stream of consciousness upon hearing the news of a close relative's death in a certain American war.

2. Might a mental occurrence have itself as intentional object? I divide intentional mental occurrences into two nonoverlapping categories. Within each category, I further divide actual instances of mental occurrences into those that are and those that are not intentional objects of distinct mental occurrences belonging to the same owner. Thus, the latter division is not relevant to my two main categories; all mental occurrences belong to one of the two main categories independent of *whatever else* may transpire in addition to them when instances of them occur. I call the two main kinds "reflective" and "nonreflective" intentional mental occurrences. The latter is no less intentional for being nonreflective. Anticipating the last part of this article, I can say (a) that all nonreflective intentional mental occurrences have cognitive content no less than the reflective ones do, but (b) any instance of a reflective mental occurrence possesses cognitive content *that includes reference to that very instance*. It is in this latter regard that reflective mental occurrences differ from nonreflective mental occurrences.

An example of a reflective mental occurrence is the following. Smith (1986) proposed that an ordinary visual perceptual experience may have the cognitive content expressible by the sentence "Phenomenally in this very experience I see this small, green, smooth-skinned frog." This mental occurrence, if veridical, is an awareness of an environmental entity as well as an awareness of the mental occurrence itself. Perhaps this "dual" awareness is accomplished in a unified manner, as reflected in the unified content expressed by the above sentence. That is, the perceiver would visually experience an external entity, state of affairs, or event as being at this very moment visually present to him or her.

Nothing about the concept of intentionality rules out reflective mental occurrences as I have characterized them. Nor must we reinterpret them so that each includes two distinct awarenesses and contents. That a meaningful occurrence's self-reference is not a self-contradictory notion can be seen from the utterance "I am now uttering this very sentence," which a speaker may use to refer to the utterance itself, as opposed to something else as in the

case of other utterances. Another example belongs to the public speaker who builds to a conclusion, which he or she announces in some such way as "I hereby state. . . ."

Causation and Intentionality

Psychologists should maintain a careful distinction between (a) the property of intentionality that some, if not all, mental occurrences possess from (b) a mental occurrence's property of being the effect of a particular cause. The property of being an intentional rather than nonintentional mental occurrence makes it possible for a mental occurrence to be about something. The property of being the effect of a certain cause makes it possible for a mental occurrence to come into existence depending on that cause's own occurrence. For example, our visual perceptual experiences of the sun result from a long chain of causation beginning with the sun's activity and traveling deep into our nervous system. Although simulations are possible, a person may go through an entire lifetime without having the same visual experience produced in him or her except by the sun on other occasions. However, if one wanted to make an invidious comparison, one could say that how the property of intentionality can make a visual perceptual experience be of the sun is more mysterious than how the sun produces effects unique to it in the nervous system.

That there could be something to decide here, namely, which is the more mysterious, is due to there being two distinct problems. An explanation for how the nervous system gives perceptual experience of the sun would include a causal account linking sun with experience of it and an account of how at the end of the causal chain, a mental occurrence transpires that makes its owner aware of an entity lying at the very start of this chain, rather than of one or more causes on the way to the visual perceptual experience. Why is not a visual perceptual experience of the sun about, for example, whatever cause in the nervous system occurs just before the visual experience [Russell, 1927]? From one time to the next that a perceiver has visual experience of the sun, there are more causes in common than just the sun. Upon realizing this, a psychologist should find it difficult to maintain, as may be his or her strong tendency, that there is only the causal problem.

Aboutness versus Directedness

A particular instance of a mental occurrence cannot have a certain cause unless the cause comes into existence. Less obviously, the same applies to the intentional object of a mental occurrence. A state of affairs that does not obtain and an event that does not occur cannot be intentional objects of an awareness, except if the awareness is a retrowareness and the pertinent

state of affairs or event characterized a certain earlier time. In contrast, exemplification of the property of intentionality does not require that the respective mental occurrence have an intentional object. Hence, two relevant properties must be distinguished: the property of intentionality, which all intentional mental occurrences exemplify, and the property of having an intentional object, which all veridical and some nonveridical intentional mental occurrences exemplify. (Some nonveridical mental occurrences do have an intentional object, but how they take the latter contains error.) The property of intentionality is an essential property for a mental occurrence to have an intentional object; however, being an intentional mental occurrence does not guarantee possessing the latter property as well. A great many mental occurrences are intentional without having an intentional object.

In distinguishing the two properties, perhaps the words *aboutness* and *directedness* can be made useful. Since *aboutness* seems to have the more relational connotation, let it refer to the property of having an intentional object. Accordingly, some mental occurrences have aboutness; they are about something. This property depends for its exemplification, in one way or another, on the existence or occurrence of that which the mental occurrence is about. Only in a derivative, nonliteral sense can a mental occurrence be about something fictitious. *Directedness* has less relational connotation; a directedness may occur, it would seem, that cannot be satisfied, that does not relate the person to anything in particular. *Directedness* may be used in place of *intentionality*, if it is clear that they both refer to the (as yet unspecified) property that enables mental occurrences to be about something.

Beyond transpiring, and exemplifying intentionality, there lies the question of whether an instance of a mental occurrence has an intentional object. Does the particular occurrence *succeed* in its directedness? Does an actual target, so to speak, complement the taking aim? Is this instance of mental occurrence about that state of affairs or events which it seems to be about, not as opposed to something else but as opposed to having *nothing at all* as its intentional object? It is not always easy or possible to answer this question.

Whether an Awareness Is a Retrowareness

Because of very limited knowledge of the past, a genuine retrowareness may not be known as such to us as individuals, groups, or science. We often do not know whether, indeed, the event occurred or state of affairs obtained that a particular retrowareness is about. A retrowareness is *in fact* about a certain past state of affairs or event. That one does not know whether an occurrent awareness (that seems to be about a past state of affairs or event) is a retrowareness does not change the fact of the matter, even when one is the owner of the retrowareness.

This point is entirely in keeping with the objective nature of the stream

of consciousness. Retrowarenesses are, often or always, components of the stream, which proceeds with or without cognizance of it. The stream of consciousness is not a construction; successive mental occurrences therein do not come into existence and go out of existence by being or not being objects of awareness. Except for reflective mental occurrences (as I explained these earlier), it is not the essence of the stream of consciousness to be "perceived," as some would say in opposition to my objective view of the stream. Segments of the stream, of greater duration in some people than others, of greater duration at some times and under some conditions, proceed entirely unselfconsciously.

Moreover, we must acknowledge the *impossibility* of discovering in some cases whether our awareness is a retrowareness. There may be no evidence on this question either one way or the other. And such evidence may never develop, so that a mental occurrence's status as a retrowareness remains completely in the dark, though, as a matter of fact, it is a retrowareness.

Does This Awareness Have an Intentional Object?

When awareness occurs that seems to be directed on future events or states of affairs, we may remain completely uncertain concerning whether what it seems to be about will ever come into existence. And again, we will never know the latter in many cases because the anticipated states of affairs or events lie in the very distant future. There is no doubt, certainly, that some of our present occurrent awarenesses have intentional objects, as it were, waiting for them in the future. That they have intentional objects, in the latter sense, does not mean we must know this at the present time—or ever.

Similar comments apply to many instances where scientific communication makes us aware. As everyone knows, it can be a formidable task to establish the truth of scientific statements. One has only to think of the efforts in physics with respect to the largest and smallest entities in existence. Again, we may have to wait a long time, if ever we do learn whether the relevant thought-awarenesses have the intentional objects they seem to have. About this, we may also change our hypotheses as we wait to find out (Mulligan and Smith, 1986).

Some theorists would prefer to inject the intentional object of a mental happening into the mental happening itself. However, to follow the lead of such authors would make it theoretically impossible for people to break out of their own individual minds. That is, if the intentional object of a mental happening is internal to it, then one cannot be aware of anything beyond the contents of one's own mental happenings. One would have awareness of something about something, but this could never be something else, something external to the stream, or even a different part of the stream. No cognitive link could be made to the world in which we evolved and were born.

One could not even take the immanent intentional objects as signs of external counterparts without having, at least in thought, mental apprehensions of the counterparts.

The Firsthand Detection of Intentionality

In distinct contrast to whether a certain mental occurrence has an intentional object, it may be far easier to decide whether this mental occurrence is intentional. Its property of intentionality does not depend on what goes on beyond the mental occurrence. A mental occurrence's being intentional may be detected firsthand, by having it and being immediately aware of having it.

An Experimental Subject Reports

Suppose an intact adult human being is participating in a psychological experiment no different in setting, approach, and atmosphere than the great majority of experiments that have been and will be conducted—except that the experimenter's scientific interest is somewhat unusual: she is investigating something to do with the stream of consciousness under carefully controlled experimental conditions. Suppose further that there has just transpired in the subject's stream a retrowareness of an event that took place during the first phase of this experimental session. Since this retrowareness has intentionality, it will seem to the subject, if he has awareness of the mental occurrence, that it is about something. And the mental occurrence will so seem to him independently of his knowing it is a retrowareness. Let us assume that what the mental occurrence seems to the subject to be about, in this instance, is an actual past situational event, which the experimenter knows took place. For she had, earlier, deliberately produced the situational event and arranged for the experimental subject's perceptual awareness of it at the time. The experimenter will know, also, that the corresponding retrowareness took place, as a result of the experimental subject's fulfilling an agreement to report the occurrence of whatever retrowareness of a certain described category took place in his stream during the second, or test, phase of the session. In accordance with that agreement, the subject has been reporting, in this part of the session, particular retrowarenesses, pseudoretrowarenesses, and nonveridical awarenesses of past events that transpired (or did not actually transpire) in the first, or input, phase of the session. The experimenter made the task a difficult one by her manipulations of materials and conditions in the first phase. Therefore, the subject is now reporting not only retrowarenesses, for he often errs, but any mental occurrence that he takes to be a retrowareness of any of the special experimental events in the first phase of the session. Moreover, in the instance of the particular retrowareness

on which we have focused, the subject experiences no hesitation or doubts in reporting it to the experimenter. The subject has no doubts that (a) it just occurred in his stream of consciousness, (b) it pertained to the controlled events of the input phase of the experimental session, and (c) it was veridical. This is an entirely realistic supposition, although such assurance is not always experienced in apprehending what transpires in one's stream; one may be uncertain with regard to, among others, the above three matters. The experimental subject has been and will again be uncertain in this connection, but not with regard, normally, to all the components of his stream of consciousness.

Instructions to Keep Watch

The subject was asked to "keep watch" on his stream of consciousness during the test phase. The experimenter is interested in which retrowarenesses occur relevant to what the experimenter caused to be presented in the input phase. For example, out of a number of events experimentally presented to the subject, of which will the subject have spontaneous retrowareness shortly thereafter? There is, of course, a certain undesirable artificiality to the experiment. The subject is alert throughout the test phase to what the experimenter's scientific interest is. At the same time, the subject was urged not to try to influence the stream's course; the experimenter wants to know what the stream quite naturally contains pertaining to the input phase of the session. Maybe the experimenter should not have called the subject's attention specifically to retrowareness. However, a refusal to influence the subject's performance would have meant his telling all about his stream, a very difficult task, perhaps impossible to accomplish. The stream of consciousness is not narrow in the way some authors suggest (Popper and Eccles, 1977). Except perhaps under special conditions, the stream does not take the form of a stately procession of mental occurrences, one component of the stream replacing the previous one (Broadbent, 1984; Neisser, 1976). Rather, the stream teems with distinct though simultaneous mental occurrences that give way in a complex manner to a further set and so on. Left on his or her own, a subject's problem becomes *what to choose to report*. If an experimenter can guide the subject to report a particular kind of component, this problem becomes manageable. Admittedly, however, such guidance may alter the stream, as compared to what it would otherwise be, requiring further research to eliminate alternative hypotheses.

An Introspective Set

How will the subject accomplish the quite ordinary psychological feat of reporting the present component of his stream, which happens to be a retro-

wareness? The subject adopted a certain set, or ongoing state of readiness, at the beginning of the test phase of the session, as a result of the experimenter's description of his next task. The subject's introspective set makes it highly likely he will have direct (reflective) awareness of certain parts of his stream, determined by the specific character of the set adopted. However, this does not ensure accurate apprehensions, apprehensions of all components of the stream, or apprehensions of all designated components. Nor is adopting an introspective set necessary to have direct (reflective) awareness of a part of the stream. However, considering a stretch of the stream, such as now is occurring in the subject (who has, following instructions, alerted himself selectively in the proper way), we would expect to find him taking note of many more relevant components of the stream than if he adopted a different set, pertaining to different components, or no introspective set at all. Adopting such a set is somewhat like giving oneself the task to notice as many social interactions as one can between women and men in a large crowded hall where an equal number are individually freely moving about.

How Does the Subject Know?

Since the present experimental situation is one in which the subject is reporting those mental occurrences he takes to be retrowarenesses of the experimental events in the input phase of the session, the question naturally arises of how the subject picks out the ones to report. With reference to the present retrowareness, the question is how the subject knows which mental occurrence it is. The fact that it is a retrowareness, he cannot directly know, that is, know it simply by being aware of the retrowareness. Some kind of evaluation must take place, however automatic, wherein the subject judges the mental occurrence of which he is aware to be a retrowareness.

This point can be viewed in the light of individual differences. People differ in their tendency to take nonveridical awarenesses of past states of affairs or events and pseudoretrowarenesses to be retrowarenesses. Almost as a matter of policy, some people consider the past to be as they are aware of it. They are, one might say, keepers and protectors of the past; which they can consult, by means of their stream, more fully and accurately (in their view) than other people can. These people brook no challenge to their authority over the past, while other people find the past as mysterious as the future. It is seldom clear to the latter, given some complexity, what exactly did happen; their retrowarenesses do not strongly impress them as such.

Taking for granted that a certain retrowareness is a retrowareness is not the same thing, of course, as determining or knowing it is. The possessor of a particular instance of retrowareness may very quickly know it is a retrowareness but only if he or she already has independent knowledge and can judge the retrowareness to be consistent with that knowledge. The subject

will report, as well, the occurrence of certain awarenesses that lack intentional objects. These will seem about the right kind of past event though, in fact, the apparent event did not occur. (Psychologists can devise experimental situations in which many pseudoretrowarenesses occur.) Also, the subject reports the occurrence of nonveridical awarenesses that do have intentional objects. The psychologist's interest easily extends to these and to pseudoretrowarenesses. In the hypothetical experiment, the instructions could well have asked the subject to report *any* awareness, whether veridical or not, that *at least seemed* about the special events of the input phase.

Detecting Intentionality Per Se

In being aware firsthand of the particular retrowareness, the subject detects certain of its properties. Among them is the retrowareness's intentionality. This property is intrinsic to the mental occurrence, in contrast to a mental occurrence being about its intentional object. The subject can tell right off that his retrowareness is an intentional mental occurrence, by taking notice of its being as though it is about something.

The latter phrase requires discussion, but first let me relate an informal comment I received. *Because* intentional mental occurrences seem as though about something, a phenomenological psychologist has criticized my view that *only some* intentional mental occurrences are properly characterized as having an intentional object. He stated that this view fails to be "phenomenological." What he meant was that, from the perspective of the person himself or herself, all the person's intentional mental occurrences have an intentional object. This intentional object may be, in the critic's view, an event that has never and will never occur, or a state of affairs that has not, does not, and will not obtain. Accordingly, for me to propose as I have, that only some mental occurrences are about anything is to treat the first-person perspective as secondary, as providing *only an appearance of what another perspective reveals to be the actual case*.

In this sense, I am indeed "nonphenomenological;" I am denying something that seems an essential part of the person's encounter with his or her stream. To deny to an intentional mental occurrence its possessing an intentional object is, indeed, to run counter to the individual's "phenomenology." However, it does not run counter to certain statements of the founder of the discipline of phenomenology (Husserl, 1913/1983). And there are recent authors who write in that tradition and agree with my position. Whether a view is phenomenological in the disciplinary sense depends on further considerations, not on the requirement that every intentional mental occurrence have an intentional object.

Retrowareness Is Intrinsically Intentional

"As Though It Were about Something"

The owner of an intentional mental occurrence knows it is intentional by its seeming to him or her "as though it were about something." However, the latter refers not simply to how the mental occurrence *seems*, but to how any intentional mental occurrence *is intrinsically and therefore seems*.

Moreover, "as though it were about something" does not imply its possessor apprehends an "as-if" property of the mental occurrence. Rather, though an intentional mental occurrence does not always have an intentional object, an instance of it is such intrinsically as to seem to be about something. The subject may, of course, know better. For example, he or she may know that a particular awareness (pseudoretrowareness) would be of a past state of affairs if only the past state of affairs existed. Hallucinating, a person may or may not be taken in, as it were, by that of which he or she seems to have perceptual awareness. Even the awarenesses of the dreaming person may at times be recognized by him or her as dream awarenesses, rather than perceptual awarenesses, as they usually seem to be. Still, the respective intentional mental occurrences will seem to the person as though they have an intentional object.

And, I suggest, this is no mere introspective illusion; in this regard, intentional mental occurrences are as they seem: that is, intentional mental occurrences *are* themselves, literally and intrinsically, *as though they have an intentional object, whether or not they do*. Also, they are intrinsically as I have described them whether or not their possessor has awareness of them. I shall develop this point.

The Owner Is Aware

Almost as though the stream is not an occurrent part of its owner, I have written of the owner as taking note of this or that mental occurrence in the stream. An occurrence in a digestive organ, too, may be the intentional object of its owner's awareness. But it can also occur while, in a coma say, its owner has no awareness of any kind. The difference from the digestive event is not a matter of being and not being an intentional object of awareness.

Rather, when an intentional mental occurrence transpires, its possessor is thereby and therein aware or seemingly aware of something. Thus, the key phrase "as though it were about something" should be replaced by the more complete "as though its possessor were aware of something." When, for example, a directly (reflectively) conscious retrowareness takes place, the owner apprehends himself or herself as at least seeming to be aware of something. The intentionality of a mental occurrence amounts to the directedness of

its owner's awareness. The latter can be multiple insofar as a person has more than a single awareness at a time.

Intentionality is a property that belongs to, so to speak, a personal as opposed to an impersonal occurrence. Retrowareness, among the other intentional mental occurrences, is an occurrence of which its possessor is also its subject, as he or she is not the subject of the aforementioned occurrence in a digestive organ (Bieri, 1982). Even in cases of being painfully aware of the digestive occurrence, its possessor is not its subject (nor is anyone else, of course). While it is true the digestive occurrence can transpire without its owner's awareness of it, the crucial point is that the digestive event is not itself a subjective event, that is, one whose occurrence is *someone having awareness or feeling something*.

Intentional Mental Occurrences Are Not Actions

The exemplification of intentionality does not imply that someone does something intentionally. I do not mean to imply that intentional mental occurrences are a kind of mental action that a subject takes (Globus, 1980; Mead, 1934). To be the subject of an intentional mental occurrence, to have awareness or seeming awareness of something about something, is not to perform, is not to engage in a performance, is not to do something "on purpose" (Sellars, 1963).

Of course, people do things that *make it likely* a certain category of mental occurrence will transpire. Adoption of an introspective set (see earlier) is an example of such doing. A further example is our ability to cause, here and now, visual imaginal awarenesses of a certain person's face to transpire in our stream of consciousness, though we may not have seen the person for years. Also, we can perform the perceptual counterpart of the previous example, in a person's physical presence, by deliberately choosing to look at him or her. We may also, upon self-command, think nonimaginally of some such happenings as constituted Ronald Reagan's press conference of November 1986.

Nevertheless, the intentional mental occurrences that result from these choices are not done by us. They happen or occur to us, which does not diminish in the slightest our being their subject. It happens to me, in this unique way, that I am the one who is aware of this or that. Consider the example of reading a story, which you do completely voluntarily. The visually determined thoughts your reading consists of, you do not specifically anticipate (usually), nor do you "do" these thoughts "on purpose" when you choose to engage in reading the story. They happen as a result of your activity. Nevertheless, the consequent stream of consciousness is a personal effect. That is, the stream consists of passive effects of your activity of reading, wherein you participate not only as active reader but also as the one who is passively aware.

The Content of Retrowareness

Again, what makes an intentional mental occurrence be as though it were about something? What makes a retrowareness be as though it were (which it is) about a certain state of affairs or event? What is the structure of a retrowareness? What does a particular instance of retrowareness itself consist in that pertains to the present question?

Of course, a retrowareness is an occurrence in the brain, but we know very little that is relevant about it from the perspective of brain science. However, from the first-person perspective, a retrowareness or other intentional mental occurrence is an awareness of something seeming or actual about something seeming or actual. That is, when you have a retrowareness, your intentional mental occurrence is such that you, its possessor, the one who is thereby and therein retroware, can be directly (reflectively) aware of the occurrence as having a particular content. This means that the particular retrowareness has a structure with features that distinguish it from other mental occurrences, including other retrowarenesses.

Surely, there must be a component of the retrowareness corresponding to the particular state of affairs or event that one is retroware of, as well as a component corresponding to one or more of its properties. There must be the latter component, too, since we are not just aware of the past state of affairs or event; rather, we are aware of something about it. At the very least, we are aware of a state of affairs as obtaining.

Your being directly (reflectively) aware of a retrowareness is like reading it for its meaning. In making you aware of this meaning, your further awareness (assuming that retrowareness and awareness of it are distinct) must share this meaning. Therefore, this further awareness must be like your awareness that is its intentional object. Since it is awareness of the first awareness in respect to its content, this content must be included in your second awareness's content.

Now, one may be tempted to construe retrowareness as itself lacking in content, thus assigning its purported content to how the owner is aware of being retroware. However, this solution would only push the problem on to the next level, forcing the question "What properties of the particular instance of direct (reflective) awareness is it that makes it be (a) about the retrowareness that is its intentional object and (b) about the past state of affairs or event that one takes the retrowareness to be about?" There seems no good reason to delay, as it were, the assignment of intentionality until direct (reflective) awareness occurs.

Rejection of Perceptual Model

In the case of some retrowarenesses, the person now has awareness of a

past state of affairs that is somewhat like having perceptual awareness of it. These retrowarenesses have a qualitative or sensuous dimension. Therefore, someone may suggest that the intentionality of retrowareness is a matter of its being as though the person were seeing or hearing or otherwise perceiving the past state of affairs or event. That is, the retrowareness is about what it is about because what it is about resembles the intentional object of a kind of perceptual awareness in how it is presented to the mind. I must reject this perceptual model for two reasons.

1. There are retrowarenesses that are nonqualitative (Woodworth, 1915). In the case of nonqualitative retrowareness, the past event or state of affairs that was originally perceived becomes again an intentional object of awareness, but now the awareness of it is strictly of the fact that it obtained or occurred and possessed certain properties. The past state of affairs or event does not seem to be present here and now before one's mind. Nevertheless, these retrowarenesses, too, are intentional mental occurrences; they, too, are intrinsically as though they are awarenesses of something about something.

2. To explain the intentional character of retrowareness by calling attention to a certain resemblance to perceptual awareness is to explain in terms of something else that equally requires explanation of its intentionality. How is it that perceptual awarenesses are, all of them, as though they are about something? What is their structure that makes this possible? One cannot answer again that they are as though the person were seeing or hearing or otherwise perceiving something in the present. Nor, as will be recalled from an earlier part of this article, will the perceptual awareness's casual relation to its intentional object serve as an explanation.

Mental Apprehension in Absence

A retrowareness's intentional object is not part of the present situation; the individual mentally apprehends it in its absence. Yet, perceptual awareness, too, did not literally apprehend it, grasp it, merge with it somehow. Visual perception is not visual absorption of the perceived. The state of affairs or event stayed there, where it obtained or occurred, outside the perceiver, who apprehended it from a spatial rather than temporal distance as in later retrowareness. (Perception of what lies in hand, mouth or body outside the nervous system also is at a distance; many causal steps lead from the intentional object to perceptual awareness of it in these cases as well.)

And it is not as though one apprehends something else in place of that which is naturally designated the intentional object. Perceptually aware of the sun beating down on you, or retroware of how it was doing so just before you sought shelter, you are not aware of something else in place of the sun. It is that which burns that you are aware of, not something else that gives no heat and which you take as a sign of the sun, a representation within

you of the sun. Indoors, your thoughts are about the sun, not about some cognitive effect that, somehow, the sun still has on you.

The Structure of Retrowareness

The intentionality of both retrowareness and pseudoretrowareness is to be explained without reference to their difference in being and not being about something. The instances of retrowareness do not differ in their internal structure from the instances of pseudoretrowareness. In both, the structure of the particular instance is as though the possessor is aware of something about something. Therefore, this structure would seem to include necessarily two special ingredients in special relation to each other: (a) one ingredient of a mental occurrence functions somehow to correspond to the state of affairs or event that is (would be) the intentional object of a retrowareness (pseudoretrowareness); (b) the other ingredient functions somehow to correspond to one or more properties of the (actual or would-be) intentional object; (c) these ingredients are unified in such a way that the owner of the mental occurrence has awareness (or seeming awareness) of the (actual or would-be) intentional object as exemplifying those properties.

What is the nature of “the functioning somehow to correspond to” that I just mentioned? Clearly, it must be a role played by an ingredient as part of the particular instance of a mental occurrence. Correspondence with something that exists, existed, or will exist beyond the mental occurrence is not necessary for the instance’s being intentional.

The combination of the two components is an analogous relation to the relation between states of affairs or events and their properties. Thus, to mentally apprehend is to take on the form of that which is apprehended, to model it selectively, at a high level of abstraction. The roles played by, shall we call them, the referential component and the modifying component of a mental apprehension are essential to the apprehension’s function of constructing a tie between the intentional object and any of its properties.

However, whereas the properties belong to the state of affairs or event, what corresponds to the properties in the way of process is not taken to belong to the corresponding referential component. Rather, the relation between referential and modifying component accounts for taking the state of affairs or event to possess particular properties. Rather than being intentional objects of awareness, the referential and modifying components normally function as parts of one’s mentally apprehending or seeming to mentally apprehend something else. There is a certain parallel here to the function of visual appearances; we are normally not aware of the appearances “through” which we see parts of the ecological environment (Cairns, 1973).

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