

Appendage Theory—Pro and Con

Thomas Natsoulas

University of California, Davis

Appendage theory seeks to identify the property of consciousness that makes conscious mental-occurrence instances conscious. For some years, Rosenthal has been proposing such a theory—according to which “state consciousness” is due to a (“higher-order”) thought that accompanies, without apparent inference, each conscious mental state and affirms its occurrence. Every higher-order thought has reference to oneself as such, as well as to the target mental state. This is necessary, according to Rosenthal; otherwise, the higher-order thought would not find its target, would not be about the specific mental state it qualifies as conscious. The present article consists of arguments from Rosenthal’s writings in support of his theory, and arguments that I formulate against his theory or arguments. I am specifically concerned with whether Rosenthal’s account is, as he claims, superior to intrinsic theory, which holds that state consciousness is not an accompaniment, but is intrinsic to every conscious mental state. Rosenthal’s theory needs to be improved in the following respects among others: (a) explaining why we do not seem able to distinguish firsthand our state consciousness from the mental-occurrence instance that is its object; (b) explaining how higher-order thoughts find their target without any reference to themselves; and (c) explaining, not by means of a perception-like process, how higher-order thoughts give state consciousness of sensory qualities.

No longer Cartesian, our everyday notion of the mental no longer identifies the mental entirely with the conscious (cf. Rosenthal, 1990a). We commonly distinguish between mental-occurrence instances that are conscious and those that are not conscious. As Searle (1989) rightly asserted, a notion of nonconscious mental-occurrence instances has become part of common sense owing to how psychology and our culture evolved since Freud appeared on the intellectual scene. About this new commonsense notion of the mental, Searle (1989) had, in part, the following to say:

Our naive, pre-theoretical notion of an *unconscious* mental state is the idea of a conscious mental state minus the consciousness. But what exactly does that mean? How

could we subtract the consciousness from a mental state and still have a *mental* state left over? Since Freud, we have grown so used to talking about unconscious mental states that we have lost sight of the fact that the answer to this question is by no means obvious. Yet it is clear that we do think of the unconscious on the model of the conscious. Our idea of an unconscious state is the idea of a mental state that just happens then and there to be unconscious; but we still understand it on the model of a conscious state in the sense that we think of it as being just like a conscious state and as one which in some sense could have been conscious. (p. 195)

Elsewhere, I have taken issue with Searle's claim that the latter statement applies, as well, to Freud's account of nonconscious (i.e., preconscious and unconscious) mental states (Natsoulas, 1992b).

Since Freud, psychologists have found it increasingly easy to convince themselves and each other that mental-occurrence instances that are not conscious take place in people's minds or brains. With the emergence of cognitive psychology and the information-processing approach, psychology has achieved its highest level of explanatory reliance on mental-occurrence instances that are not conscious. In cognitive science, the invoking of non-conscious mental-occurrence instances has grown so common that it is producing expressions of skepticism from more empirically oriented authors. For example, Puccetti (1983) wrote: "But it is not clear to me that with cognitivism we have not passed from the sterile abyss of behaviorism to an equally sterile attitude of rank superstition" (p. 737). And, during the same period, there have appeared some strong statements challenging the literally mental character of all mental-occurrence instances other than the conscious ones (e.g., Brentano [1911/1973], Dulany [1984, 1991], James [1890], Searle [1989, 1990a, 1990b], Zelazo and Reznick [1990]).

What Makes Conscious Mental-Occurrence Instances Conscious?

Whichever kind of view you wish to espouse, whether a view advocating or rejecting the existence of mental-occurrence instances that are not conscious, you quickly come to the question either of (a) what it is that makes all mental-occurrence instances conscious or of (b) how the conscious ones among them are conscious. Rosenthal (1990a) called this "the question of state consciousness." He asked "what kind of property the consciousness of mental states is" and answered: *when a conscious mental-occurrence instance transpires, its owner is aware of it without engaging in any inference of which he or she is aware* (Rosenthal, 1990b).

Agreement exists among the large majority of us regarding at least this one thing about our conscious mental-occurrence instances: we have awareness of them that does not seem to be based on observation of something else or on inference. Awareness of a mental-occurrence instance may take place without any inference, or as a result of inference of which its owner is not

aware, or resulting from inference of which its owner is aware. For Rosenthal, only in the first two cases may a mental-occurrence instance qualify as conscious. If awareness of a mental-occurrence instance knowingly takes place as a result of conscious inference based on observation of, for example, something that one does, this awareness does not serve to qualify the instance as conscious.

Why does having conscious inferential awareness of a mental-occurrence instance disqualify it as conscious? For his basic understanding of state consciousness, Rosenthal returned to the common impression that our awareness of a conscious mental-occurrence instance is immediate, is not mediated by observation or by inference (see first "pro" section below).

"Introspective State Consciousness"

Rosenthal (1990a) does not claim that we have that impression of immediacy whenever a conscious mental-occurrence instance takes place in us, or even that we frequently have it. The absence of any awareness of inference is necessary for state consciousness, not the having of an awareness of no inference. The impression of immediacy requires an, as it were, extra level of awareness. Rosenthal's view is that one is not aware of being aware of one's conscious mental-occurrence instances every time that one of these occurs. He states that this extra awareness seldom takes place though mental-occurrence instances are often conscious (cf. Rosenthal, in press-a).

However, the extra level of awareness always does occur during "introspection," which is an activity in which we rarely engage according to Rosenthal. Rosenthal (1990a) distinguishes "introspective" and "nonintrospective" state consciousness as follows:

Introspecting one's own mental state implies deliberately focusing on one's being in that state. And that involves not merely being conscious of being in that state [i.e., nonintrospective state consciousness], but being actually aware that one is thus aware. Introspection [i.e., introspective state consciousness] is a kind of higher-order consciousness; it is transitive consciousness of being conscious of one's mental states. (p. 52)

Thus, in Rosenthal's view, awareness of a mental-occurrence instance can occur "in the dark"—by which I mean not only (a) that one may be unaware of the inference (assuming there is one) resulting in the awareness, but also (b) that one may be unaware of the mental-occurrence instance as being one of which one has awareness (though Rosenthal has not consistently maintained the latter, as will be seen). But when we are introspecting, we are aware of our conscious mental-occurrence instances as conscious; state consciousness does reveal itself at those times.

An Appendage Theory of State Consciousness

The obvious first question is how noninferential awareness of mental-occurrence instances takes place, assuming not all awareness of a conscious mental-occurrence instance is due to inference. Rosenthal is what I have called, following Freud (1895/1964, p. 311), an “appendage” theorist, in the sense of holding that *the awareness that qualifies a conscious mental-occurrence instance as conscious must be another, distinct mental-occurrence instance that “accompanies” the conscious mental-occurrence instance* (Natsoulas, 1989b, pp. 624–625; in press). State consciousness would be an appendage to all conscious mental-occurrence instances. Were Rosenthal’s account to turn out to be true, a distinct awareness of them “would ‘dog’ all mental events that did not escape our notice” (O’Shaughnessy, 1972, p. 33). More specifically, Rosenthal (1990b) stated,

When a mental state is conscious, we have a higher-order thought about that state, a higher-order thought not based on any inference of which we’re aware. We can narrow things down a bit more. When a mental state is conscious we are conscious of being in that state; so the content of the higher-order thought must be, roughly, that one is in that very state. Moreover, since being disposed to have a thought about something is not sufficient for one to be conscious of that thing, the higher-order thought must be an occurrent state, and not just a disposition to think that one is in the target state. (p. 6)

Rosenthal added: (a) the necessary higher-order thought must be an “assertoric” thought, a thought that affirms the occurrence of the respective mental-occurrence instance, not a thought that is just a doubting, a wondering, a hoping, or the like, with regard to the mental-occurrence instance. And, also, (b) the higher-order thought must be a thought affirming one’s being, oneself, in the target state. Otherwise, according to Rosenthal (e.g., 1990a, p. 37), the higher-order thought cannot be directed on a specific mental-occurrence instance, cannot pick out the particular instance it is about and thereby qualify as conscious (cf. Natsoulas, in press).

In the present article, I examine some arguments Rosenthal has used in advocacy of his appendage theory. These are all arguments according to which state consciousness is no more intimately connected with a conscious mental-occurrence instance than as an accompaniment that refers to this instance and is not seemingly inferential. Also, I formulate arguments against Rosenthal’s account of the difference between conscious and non-conscious mental-occurrence instances. This article consists of a sequence of sections that are either on the “pro” or on the “con” side in relation to Rosenthal’s account.

Update. Before proceeding, I must qualify the above by calling attention to a very late development in Rosenthal’s account about which I learned shortly before the present article was accepted for publication (Rosenthal, in press-a).

This new development explicitly modifies Rosenthal's account from being consistently an appendage theory of state consciousness as described above. Rosenthal (in press-a) writes:

Thoughts plainly can have themselves as intentional objects Given the right [self-referential] content, such a thought would have itself as its target and would thereby be conscious The term "appendage theory" is therefore misleading here, since it's plausible that an appendage is never identical with the thing it's an appendage of.

I shall refer to this new development at several points in the present article. However, let me note here that Rosenthal (in press-a) considers self-referential thoughts, thoughts having reference at least in part to themselves, to be rare; so, his account of state consciousness remains very largely an appendage theory.

As will be seen, Rosenthal earlier believed that self-referential thoughts are very common, at least as frequent as conscious mental-occurrence instances, but he insisted that a thought that is self-referential is not by that fact a conscious thought (Rosenthal, 1990a). Thus, Rosenthal (1986, 1990a) in effect claimed to be a thoroughly consistent appendage theorist notwithstanding his admission of self-referential thoughts. The very recent development in his thinking (Rosenthal, in press-a) accepts that self-referential thoughts are conscious, in accordance with his own understanding of state consciousness, but holds that they are far less frequent than he previously believed them to be, as will be seen.

Pro: Rosenthal's Appendage Theory of State Consciousness Is Consistent with a Certain Relevant Commonsense Observation

An argument that Rosenthal (1990b) used to support his appendage account starts from the following commonsense observation. *All conscious mental-occurrence instances are objects of their owner's immediate awareness; that is, in order to be aware of one's conscious mental-occurrence instances, there is nothing else of which one needs to be aware.* Rosenthal (1990b) assumes that this piece of common sense is largely true, allowing for cases of unwittingly mediated, inferentially based awareness. Then, he proposes that we explain noninferential awareness of mental-occurrence instances as best we can. Only two alternative explanations, he holds, are possible: either each conscious mental-occurrence instance is perceived by its owner or its owner thinks it; either way, there would occur immediate awareness of the particular mental-occurrence instance. Rosenthal (1990b) rejects the perceptual model in favor of the thought model. In a later section, I shall consider Rosenthal's "pro" argument from the best explanation. And in the section after this one, I shall address whether Rosenthal's theoretical construal of the immediacy of state consciousness fully corresponds to the above common observation to which he referred.

According to Rosenthal's understanding of the higher-order thought that is supposed to be the immediate awareness of a mental-occurrence instance, the higher-order thought *simply pops into one's mind, or so it seems to one*; it may actually result, in some cases, from a nonconscious inferential process. As Rosenthal (1990a) stated, "Because of this independence [from conscious inference and observation], we normally have no idea how we come to be conscious of those states and thus, on this proposal, no idea of why those states are . . . conscious" (p. 31). Thus, there need be no subjective difference in how they come to occur between an immediate awareness of this kind and a present affirmative thought about a much earlier mental-occurrence instance. Of course, there could be a subjective difference if, in the one case, one had set oneself to introspect one's mental-occurrence instances as they took place and, in the other case, one had set oneself to remember one's experiences of a certain earlier time. But Rosenthal's immediate awareness itself is simply having, without awareness of any inference, a thought with the content that one is now in that mental state. In Rosenthal's (1990b) view, the common observation, to the effect that we have immediate awareness of all our conscious mental-occurrence instances, *refers to the same kind of awareness as occurs in having an assertoric thought about something from out of the blue*. This is because Rosenthal (1990b) thinks of the commonly recognized intuitive immediacy of state consciousness as amounting to the absence of conscious inference (cf. Rosenthal, in press-a).

Con: However, Rosenthal's Appendage Account Is Not Consistent with the Evidently Reflexive Character of State Consciousness

Although Rosenthal (1990b) held that his account accommodates our intuitive understanding of the immediacy involved in our being conscious of our conscious mental-occurrence instances, he elsewhere rightly suggested that our intuitive impression of state consciousness is not as of an accompanying awareness, that there is actually "a strong intuitive sense that the consciousness of mental states is somehow reflexive, or self-referential" (Rosenthal, 1986, p. 345). This intuitive sense does not reduce to the sense that the immediacy is simply a matter of a suitable thought arriving one knows not how or from where. There is more to the commonly apparent reflexivity of state consciousness than simply the absence of inference. *It is in the very existence of a conscious mental-occurrence instance that one has immediate awareness of it; the immediate awareness of a conscious mental-occurrence instance is intrinsic to it*. This is the commonsense observation with which Rosenthal's account needs to be made consistent in order for him to have an argument from commonsense observation.

Pro: The Higher-Order Thoughts Are Indeed "Diaphanous"; Rosenthal Proffers an Explanation for This Obvious Phenomenological Fact

Or, at least, Rosenthal should be able to explain his appendage account's not being consistent with this common observation. If his account is true, then why does the proposed appendage character of state consciousness not appear, upon introspection, as it is? With reference to sensory mental states, here is how Rosenthal (1986) forthrightly admitted and tried to explain the disparity between his view and commonsense observation:

One reason that [state] consciousness seems intrinsic to our sensory states is that it is difficult to isolate that consciousness as a distinct component of our mental experience. When we try to focus on the [state] consciousness of a particular sensory state, we typically end up picking out only the sensory state we are conscious of, instead. As Moore [1903/1922] usefully put it, [state] consciousness is "transparent," or "diaphanous." Since efforts to pick out [state] consciousness itself issue instead in the states we are conscious of, it is tempting to conclude that the [state] consciousness is actually part of those states. But the present account gives a better explanation of the diaphanous character of [state] consciousness. We normally focus on the sensory state and not on our [state] consciousness of it only because that consciousness consists in our having a higher-order thought, and that thought is usually not itself a conscious thought. (p. 345)

I comment in the next section on this explanation of the "diaphanous" character of state consciousness.

Note that in his most recent statement, Rosenthal (in press-a) includes this sentence on his last page: "Because our higher-order thoughts are *seldom* conscious, we *never* notice anything extrinsic to our conscious states that could plausibly be responsible for our being conscious of them" (italics added). Why does Rosenthal here say "never" rather than "seldom" a second time? If higher-order thoughts are sometimes conscious, should we not sometimes take notice of them as responsible for our state consciousness?

Con: According to Rosenthal's Own Theory, the Activity of Introspecting Must Always Include Conscious Higher-Order Thoughts

As I indicated early in the present article, it was Rosenthal's understanding of introspection that introspection involves awareness of the higher-order thoughts which, by simply their occurrence and no further effect, render (better: qualify) conscious mental-occurrence instances (as) conscious. I now suggest that any effort of the kind mentioned in the above quoted paragraph (Rosenthal, 1986, p. 345), to "isolate" the state consciousness of a conscious mental-occurrence instance, would necessarily be a case of introspection; and, therefore, according to Rosenthal's own understanding of introspection, any such effort would involve conscious rather than merely nonconscious higher-order thoughts.

Yet, despite the postulated higher-order thoughts' being, themselves too, objects of state consciousness during the activity of introspecting, one does not in fact distinguish them firsthand from the respective mental-occurrence instance that is their object. This should be very surprising to anyone who accepts Rosenthal's account. Contrary to that account, even when we make an effort to pick out state consciousness itself, we are aware of our conscious mental-occurrence instance as conscious, as an object of our awareness, without awareness of a distinct higher-order thought directed on it.

Con: Rosenthal (1986) Proposed That All Higher-Order Thoughts Are Self-Referential; All of Them Would Therefore Be Conscious

The commonsense observation of the preceding section runs even more counter to Rosenthal's (1986) early statement of his account of state consciousness. Rosenthal suggested in that article and in the very same context as the above quoted paragraph, that *the higher-order thought, which confers consciousness, is self-directed and possesses content distinguishing itself from the mental-occurrence instance it is supposed to make conscious*. The following passage includes Rosenthal's (1986) characterization of the higher-order thought's content:

For a mental state to be conscious, the corresponding higher-order thought must be a thought about oneself, that is, a thought about the mental being that is in the conscious state. So . . . we can construe that thought as being, in part, about itself. For it is reasonable to regard the content of the [higher-order] thought as being that whatever individual has this very thought is also in the specified mental state. (p. 346)

Rosenthal suggested that the higher-order thoughts' referring each one of them to itself helps to explain the apparent reflexivity of state consciousness, though a higher-order thought is always the source and locus of state consciousness. Our sense that state consciousness is reflexive is due to a higher-order thought's being directed as well on itself. This point was not further clarified. However, Rosenthal (in press-a) has very recently abandoned the view that higher-order thoughts are self-referential (see later).

In a previous article, I suggested that Rosenthal's treatment of his higher-order thoughts as referring each of them to itself is *an admission that some mental-occurrence instances are intrinsically conscious* (Natsoulas, 1989a). Also, I pointed out that Rosenthal did not explain why only the higher-order thoughts are self-referring, *why all the primary mental-occurrence instances require an appendage to make them conscious while the higher-order thoughts do not so require*. However, Rosenthal (1990a) objected to my understanding, stating that a thought that refers to itself is not, *ipso facto*, a conscious thought. Accordingly, for a thought to be intrinsically conscious, it would have to be an affirmative thought that one is, oneself, having the thought.

According to Rosenthal (1990a), this is not what he was ascribing to his higher-order thoughts in his 1986 article; rather, he meant that they are self-referential only in affirming *that the same (further unspecified) individual has both the higher-order thought and the target state*. Rosenthal (1990a) stated, "On my earlier proposal, the [higher-order thought] does not say of an independently identified self that it has that [higher-order thought], but rather identifies the self as being whatever has the [higher-order thought]" (p. 39).

However, this cannot be a correct expression of Rosenthal's view, because (a) Rosenthal (1990a) also describes the content of his higher-order thoughts that render another mental state conscious as being "that one is, oneself, in the mental state" (p. 37). Otherwise, the target mental state, according to Rosenthal's (1990a) account, does not qualify as a conscious state. Thus, it would seem to be not the case, in Rosenthal's (1990a) own view, that a higher-order thought identifies the self merely in that minimal way (i.e., simply as being whoever it is that has the higher-order thought) which, Rosenthal (1990a) stated, falls short of qualifying higher-order thoughts as conscious. Moreover, (b) Rosenthal (1986, p. 344) had held quite explicitly that our conceptions of self *arise from our being in already conscious mental states, made conscious by higher-order thoughts which find their target simply by means of their reference to the same individual's having both that very thought and the target mental state*.

It follows that all of Rosenthal's higher-order thoughts, by which mental-occurrence instances qualify as conscious, *themselves too qualify as conscious and do so intrinsically—by virtue of their own structure*. To be conscious, they do not require a yet higher-order thought. As I suggested elsewhere, Rosenthal's account of state consciousness must be classified as a *modified* appendage theory if it continues to include higher-order thoughts that make their owner aware of them by their own occurrence and nothing more (Natsoulas, in press-b).

As mentioned, Rosenthal (in press-a) has very recently disavowed his earlier move that made all higher-order thoughts self-referential, for the reason that (a) it is "very likely" true that they would therefore all be conscious and (b) this would contradict the fact of the matter (see next to next section).

*Con: Rosenthal's Account of Introspection Assumes Two Higher-Order Thoughts
Each with a Different Mental Occurrence as Object*

Given such higher-order thoughts as Rosenthal (1986) early on proposed, with a content that is self-referring, and the purported distinct awareness of this thought that, according to Rosenthal (1990a), perforce takes place during introspection, surely we would not come away from an effort to "isolate" state consciousness as we do: with the intuitive conviction that its property

of state consciousness is intrinsic to a conscious mental-occurrence instance. We are supposed to be aware of a higher-order thought that has a content that distinguishes the thought from the respective conscious mental-occurrence instance, of which it is an awareness.

And even if the higher-order thought does not so distinguish, we would have, according to Rosenthal, *two different higher-order thoughts (i.e., a second-order and a third-order thought) with two different objects. That is, we would be aware, in introspecting, of two mental-occurrence instances, of both the higher-order thought and of its object.* Why, then, do we not actually distinguish the two from each other? Why do we not take them to be distinct existences, just as we distinguish, very often and easily, our perceptual experiences of something physically present before our eyes and the thoughts that we are having about this something while we are looking at it?

Again, in recent papers, Rosenthal did not consider the point that I have just made against his appendage hypothesis of state consciousness. Instead, he wrote,

[State] consciousness seems to be nonrelational [i.e., intrinsic] because we are generally unaware of the higher-order thought that makes a mental state conscious, and thus unaware of the relation by virtue of which that [state] consciousness is conferred. (Rosenthal, 1989, pp. 29–30).

One difficulty that seems to face this hypothesis is that even when we are in many conscious states, we are typically unaware of any such higher-order thoughts. So far from being a difficulty, however, the hypothesis actually predicts that this would be so. The higher-order thoughts postulated by the hypothesis would not themselves be conscious thoughts unless they, in turn, were accompanied by yet higher-order thoughts about them. (Rosenthal, 1990b, p. 7)

The difficulty for Rosenthal's hypothesis has to do with *how state consciousness seems*. This difficulty arises when people introspect their conscious mental-occurrence instances or when they try to become aware of how this state consciousness occurs, and they do not find any distinct higher-order thoughts. Surely, the hypothesis predicts *that people should become aware of these distinct thoughts when they attempt to introspect them or to introspect their conscious mental-occurrence instances.* For whatever reason it may be undertaken, introspection is an effort which is supposed by Rosenthal to render those higher-order thoughts conscious by means of yet higher-order thoughts.

*Con: Strong Empirical Evidence Exists That Counts Against Rosenthal's
Appendage Account of State Consciousness*

As I mentioned, there has taken place a very recent alteration in Rosenthal's (in press-a) thinking on these matters. He has explicitly dis-

avowed his earlier claim that higher-order thoughts are all self-referential. To hold that they are, Rosenthal admitted, is very likely to adopt a “self-intimational” (i.e., intrinsic) view of state consciousness in substantial part. Moreover, that higher-order thoughts are uniformly or even frequently conscious is simply wrong empirically: “We’re seldom aware of the higher-order thoughts in virtue of which our mental states are conscious” (Rosenthal, *in press-a*).

My argument of a preceding section was that Rosenthal’s higher-order thoughts are, if they exist, diaphanous; we never seem to ourselves to be aware of them, even when we try to distinguish them from the mental-occurrence instances that are their objects. Since they are always diaphanous, even under conditions (i.e., introspection) in which Rosenthal should expect them not to be diaphanous, *the kind of empirical evidence that Rosenthal (in press-a) took seriously enough to abandon self-referential higher-order thoughts should contribute to his reconsidering the theoretical need for higher-order thoughts and, therefore, his appendage theory of state consciousness—unless he is able to explain adequately the contrary appearances which favor intrinsic theory.* In a footnote, Rosenthal (*in press-a*) did state that there are ways, which he did not specify, in which his appendage hypothesis can explain “our intuitive sense that there is something reflexive about a mental state’s being conscious.”

Let me emphasize that the above evidence against appendage theory is strong evidence from Rosenthal’s own perspective. When he realized that the self-referential higher-order thoughts he had postulated are conscious according to his own theory, he dropped them *for the reason that we are commonly not aware of them*, thus leaving mainly higher-order thoughts that are not self-referential in his system. For the same reason *plus the fact that we are not aware of higher-order thoughts when we are introspecting*, why does Rosenthal not drop his postulated higher-order thoughts altogether?

Pro: Might It Be Useful to Rosenthal’s Account to Include Awareness of Objects of State Consciousness As Being Such?

Rosenthal (1989, p. 22) suggests (a) that one can have a vivid “feeling that the [state] consciousness of mental states is somehow immediate” and (b) that this feeling is most vivid when one’s higher-order thought is not conscious. I take it that, according to Rosenthal, the only state consciousness that one has in such cases is provided by the higher-order thought alone; in such cases, there is no occurrence of a yet higher-order thought, and the higher-order thought makes no reference to itself. But then how can we be aware of the target state as being a conscious mental-occurrence instance? We are not aware, in such cases as described by Rosenthal, of the higher-order thought that is our awareness of the target state.

Perhaps Rosenthal could say that a nonconscious higher-order thought can simply take its respective target state to be a conscious state. There would be no need, that is, to be aware of one's awareness of a mental-occurrence instance in order to apprehend the mental-occurrence instance as one of which one is conscious. One can nonconsciously think of it as an object of one's state consciousness.

However, I am not sure this interpretation or extension would meet with Rosenthal's approval. As an implication of his account, would such a higher-order thought, since it does have reference to one's state consciousness (which is in fact, according to Rosenthal, one's higher-order thought) of the mental-occurrence instance, render the higher-order thought itself conscious? Probably not, because the higher-order thought would not be referred to as such in one's being aware of the mental-occurrence instance. The target mental-occurrence instance would be taken as possessing the property of state consciousness, which is to take it as a mental-occurrence instance of which one is now aware sans observation or inference.

Pro: The Higher-Order Thought Theory Provides the Best Explanation of State Consciousness

Rosenthal (1990b) rejected any inner perceptual explanation of state consciousness (cf. Natsoulas [in press] on "mental-eye theory"). He argued that any perceptual model of state consciousness cannot explain how we can have inner consciousness of the specific sensory quality that some conscious mental-occurrence instances possess. Inner perceptions of these instances would possess their own quality, as all perceptions do, but this quality would be, no doubt, different from the quality of the sensory objects of inner perception. To assume that they involve the same quality would be "unmotivated." And so, how could inner perceptions provide awareness of the specific sense quality of mental-occurrence instances?

I do not address here any arguments Rosenthal has made against perceptual models of state consciousness. I am only concerned with why Rosenthal believes his thought model of state consciousness is more adequate than any intrinsic hypothesis is, with how his appendage theory is supposed to provide a better explanation of state consciousness than any view that ascribes our immediate awareness of our conscious mental-occurrence instances to each individual conscious mental-occurrence instance itself. *What can the higher-order thought theory explain that an intrinsic theory cannot explain?*

Rosenthal (1990a) stated that intrinsic theory, too, should be rejected, leaving only his appendage theory as, most probably, the true explanation of state consciousness. As a "powerful" reason, he gave this: "If being conscious were intrinsic to those states which are conscious, an informative explana-

tion of such [state] consciousness would be impossible" (p. 2). Rosenthal made this statement several times in various papers. But it turns out not to be intrinsicity per se that is supposed to have the consequence of no informative explanation of state consciousness; rather, it is supposed to be the lack of an "articulated structure" for state consciousness (Rosenthal, 1990a). That is, Rosenthal associates proposals of intrinsicity with treating of state consciousness as though it were a simple unanalyzable property.

Con: The "Equal Plausibility" of Rosenthal's Account Relative to Intrinsic Theory of State Consciousness Is Already In Doubt

However, Rosenthal (1990a) immediately referred to Brentano (1911/1973) as an example of an intrinsic theorist who has assigned informative structure to state consciousness. In my view, Rosenthal could also have mentioned his own earlier treatment of higher-order thoughts as self-referential, which I mentioned above (Natsoulas, 1989a; Rosenthal, 1986). There is also Smith's (1986, 1988, 1989) intrinsic account of state consciousness, among other intrinsic accounts (see Natsoulas [1992a] for a review). Smith's theory is a highly articulated example of intrinsic theory. Curiously, Rosenthal (1990a) referred only in passing to Smith's article "The Structure of (Self-) Consciousness," without addressing the alternative account of state consciousness that it contains.

And Rosenthal (1990a) quickly modified his claim from (a) his appendage account's being better because intrinsic theory cannot explain state consciousness to (b) his appendage account's being "equally plausible" as any intrinsic theory that assigns an articulated self-referential structure to conscious mental-occurrence instances in order to explain their being conscious. However, the equal plausibility of Rosenthal's account of state consciousness is in doubt for the following reasons.

1. We have seen that higher-order thought theory is initially implausible, that Rosenthal must explain the disparity between the evident intrinsicity of state consciousness and the theoretical requirement of a higher-order thought. We have seen that Rosenthal has not yet successfully explained this disparity, though he thinks that he has. On the face of it, the matter does not stand as Rosenthal (1990a) suggested: "The deliverances of consciousness are compatible with its being an intrinsic property and with its being an extrinsic property" (p. 31). What Rosenthal needs to do, given his appendage theory, is to explain away the nonsupportive deliverance of consciousness which seems to reveal state consciousness as intrinsic.

2. In a previous article, I argued at some length, and shall not repeat the arguments here, that pure appendage theory runs into what may be insurmountable difficulties in explaining how higher-order thoughts, or the like,

can "find their target" (Natsoulas, in press). Until it can be successfully explained how a higher-order thought, on its own, can make us aware of a particular mental-occurrence instance distinct from it, Rosenthal's account remains implausible. My arguments in the previous article all pertain to appendage theory in its pure form, by which I mean a theory that does not include any intrinsically conscious mental-occurrence instances at all.

Rosenthal (in press-a) has replied to my considering it a weakness of appendage theory that it seems unable to explain how one's nonobservational, nonintrinsic, subjectively immediate awareness of a mental-occurrence instance finds its particular target. He has stated that the problem is not specific to his theory, but is the general, as yet unsolved problem of intentionality.

At the same time, he stated that the intrinsic theory "seem[s] to have no difficulty in answering this question. On the self-intimational [i.e., intrinsic] theory our direct (reflective) awareness is an awareness of a particular mental-state token because that awareness is intrinsic to the token." Perhaps, Rosenthal would now say that this contributes to intrinsic theory's greater plausibility relative to appendage theory.

Regarding Rosenthal's proposal that a theory of state consciousness does not have to proffer an answer to how, for example, higher-order thoughts find their target without being self-referential, let me simply raise the question whether a theorist of perceptual experience could similarly free himself or herself of the corresponding responsibility. Would not the perceptual system's ability to produce perceptual experiences that are about something in particular in the environment be among the first orders of explanatory business?

3. While addressing the very problem of the preceding paragraphs, Rosenthal (1986) modified his appendage theory to include higher-order thoughts that are so structured as to give immediate awareness each one of itself. As I stated, Rosenthal's concession to intrinsic theory raises the question of why mental-occurrence instances other than the higher-order thoughts cannot also intrinsically possess an articulated structure that makes their owner immediately aware of them too (Natsoulas, 1989a). Rosenthal's higher-order thought theory will remain implausible qua appendage theory if it cannot be made to work without including self-referential mental-occurrence instances.

Rosenthal (in press-a) has very recently abandoned his previous understanding of higher-order thoughts as self-referential, but he countenanced the (rare) occurrence of intrinsically conscious thoughts. Recall, also, that his abandonment of the view that all higher-order thoughts are self-referential was empirically motivated and was not a denial that self-referential higher-order thoughts take place. Therefore, the question I raised in the preceding paragraph still stands. If thoughts can be self-intimating, why cannot (as, e.g., Smith [1989] holds) some perceptual experiences, wishes, mem-

ory experiences, and so on, also be self-intimating? And if the latter can be self-intimating, why is it not otiose to introduce higher-order thoughts to do the job of state consciousness?

*Pro: State Consciousness Necessarily Involves Reference to Oneself As Such
According to Rosenthal's Appendage Theory*

Rosenthal's claim of equal plausibility for his account of state consciousness must rest on something else, on something explanatory that Rosenthal's theory—which separates a conscious mental-occurrence instance from its owner's consciousness of it, making them distinct existences from each other—can do that intrinsic accounts cannot accomplish. But the prognosis here should be positive, for Rosenthal (1990a) insisted that, however tempting an intrinsic explanation of state consciousness may be, “it is only if we regard being conscious as a relational property that we can explain what consciousness consists in” (p. 25).

Rosenthal (1990a) claimed that his appendage account of state consciousness can “save the phenomenological appearances at least as well as one can by assuming consciousness is an intrinsic property, and very likely more successfully” (p. 48), and he gave three examples. (a) The first pertains to the difficulty we have in subjectively “isolating” its state consciousness from a conscious mental-occurrence instance. This has already been considered in the present article. I concluded that Rosenthal's account leads us to expect that, whenever we introspect, we will distinguish the particular conscious mental-occurrence instance from its property of consciousness in the form of a higher-order thought that is about the mental-occurrence instance. (b) The third of the three ways in which Rosenthal's account is supposed to save more successfully than intrinsic theory the phenomenological appearances pertains to the firsthand seeming to us that some of our conscious mental states are not continually conscious while they last. We are aware of them for only part of the time that they are occurring; their duration includes one or more nonconscious phases. I shall return in a subsequent section to how Rosenthal accounts for this variability, and why he thinks his account can handle it better than intrinsic theory can. I address first (c) the second “appearance” that Rosenthal's appendage theory accounts for “more successfully” than intrinsic theory. In this regard, the following is his entire statement and argument in “A Theory of Consciousness” (Rosenthal, 1990a):

A strong intuitive connection obtains between being in a conscious state and being conscious of oneself. Again, the idea that consciousness is intrinsic may seem to help, by implying some sort of self-reference. This is a confusion. If being conscious were intrinsic to mental states, perhaps those states would refer to themselves, but what is needed is reference to the self, which is different. Again, the [higher-order thought]

theory explains the phenomenon more successfully, since one's [higher-order thoughts] must refer to oneself. (p. 49)

Rosenthal has in mind here being conscious of oneself as such, not simply of something that is a part of oneself or of something which, or someone who, happens actually to be oneself. State consciousness involves the exercise of a concept of oneself, a concept of oneself as also the one whose mental-occurrence instance the particular conscious target mental-occurrence instance is. Our common intuitive sense also ascribes to state consciousness awareness of oneself as such, according to Rosenthal. In contrast, intrinsic theory requires that a conscious mental-occurrence instance involve reference to itself but not necessarily reference to oneself as such.

Con: Mental Absorption Involves Impersonal State Consciousness and Thus Contradicts Higher-Order Thought Theory

How will Rosenthal interpret mental-occurrence instances that are a part of being mentally absorbed in some activity, for example, in thought, in fantasy, in mentally working out a problem, in a dramatic production that one is watching, or listening to on the radio, or in a novel that one is reading? We commonly think of "losing ourselves" in an activity, of having "lost" ourselves during the period of mental absorption, as having lost all awareness of ourselves as such. From being mentally absorbed, we often return to ourselves with a start, realizing once more that and who we are. Yet we do not consider ourselves to have been not conscious during the period of being mentally absorbed; instead, we often think of ourselves as having been more vividly or intensely conscious during a particular case of mental absorption than we are during many activities in which we engage while aware of ourselves as such all along the way.

Thus, contrary to Rosenthal's account, one's state consciousness does not require that one have awareness that it is oneself who is having one's conscious mental-occurrence instances. I do not believe Rosenthal, in response, would claim *that the mental-occurrence instances that comprise mental absorption are not conscious or that we have no awareness of them as they occur*—since we often know later, for example, not simply the dramatic events that made up a certain fictional movie which we absorbedly saw in recent days, but also, fairly minutely, how the successive scenes of the movie phenomenally looked, or how the movie visually appeared to us from scene to scene. Such visual appearances are a dimension of the stream of our visual perceptual awareness (experience) of the movie. *How could we later remember them if we were originally unaware of them, and were aware, instead, only of the events comprising the dramatic action of the movie?* (For that matter, could we consciously remember

the dramatic events themselves comprising the story of the movie if we simply had our visual and auditory experiences of the movie and were not at the time conscious of these experiences that we were having?) With this point, Rosenthal (in press-b) would seem to be in agreement, for he wrote,

Without transitive consciousness [i.e., without higher-order consciousness of them], perceptions don't by themselves determine subsequent memories, since memories will follow the way my transitive consciousness of my perceptions represents them.

Surely, it will not prove true empirically that the more mentally absorbing a movie was for you (i.e., the more you lost yourself in watching a movie), the less of the movie's "look" you are later in a position consciously to remember.

Relative to the account of state consciousness in terms of higher-order thoughts, an intrinsic theory would seem more easily to accommodate what might be called "impersonal state consciousness." That is, certain of one's conscious mental-occurrence instances give awareness of something else and also, at the same time, awareness of themselves as awarenesses of something else, *but they do not give awareness of oneself as such*. In this sense, they are conscious but "impersonal."

For example, an intrinsic theorist of state consciousness, namely Smith (1989), countenances certain unusual mental-occurrence instances as might occur during the kind of meditation that has as a goal the elimination of all awareness of oneself as such. In Smith's phenomenological terms, such mental-occurrence instances lack an "I" structure, but they may still possess a reflexive structure; that is, their content may be along the (not necessarily linguistic) lines of "In this very experience there is visually experienced this little blue vase."

In contrast, Rosenthal's theory does not allow for impersonal conscious mental-occurrence instances since, as we have seen, the respective higher-order thought was held not to find its target whenever the higher-order thought does not include awareness of oneself as such. Of course, Rosenthal's account may yet be improved to allow for impersonal state consciousness.

Pro: Rosenthal's Appendage Account of State Consciousness May Have a Way of Including Impersonal State Consciousness

Recall the reason that Rosenthal (1986) included reference to oneself in every higher-order thought: namely, his appendage theory had no other way to explain the higher-order thought's being about the respective target state. However, others of one's thoughts do find their respective targets in other ways, which do not involve reference to oneself. If Rosenthal could get his higher-order thoughts, too, to find their targets in another way, then he would not need to make state consciousness dependent on awareness of one-

self. In that case, some mental-occurrence instances could be impersonally state conscious, consistently with Rosenthal's own account.

Also, Rosenthal's (1986) minimal idea of oneself, simply as the one who has this higher-order thought (and also has the mental state that the thought represents), that is, the minimal idea of oneself that Rosenthal (1986) proposed as necessary for zeroing-in on the specific object of state consciousness, might serve to allow for impersonally state conscious mental-occurrence instances. For state consciousness, according to Rosenthal, one does not need to pick oneself out in any further way. This is implied by part of Rosenthal's (1990a) discussion of whether language is necessary for state consciousness. He stated,

A minimal concept of self will suffice for reference to oneself; no more is needed than a concept that allows distinguishing between oneself and other things. Such a minimal concept need not specify what sort of thing the self is. Thus it need not imply that the self . . . has some special sort of unity, or is a center of consciousness, or is transparent to itself, or even that it has mental properties. (pp. 38-39)

This statement would seem to imply that the minimal concept of self involved in state consciousness does not require an independent identification of oneself.

Pro: Rosenthal's Appendage Theory Allows a Mental State's Shifting Between Being Conscious and Not Being Conscious

Rosenthal (1990a) cites as evidence favoring his appendage theory that the identical mental state, a specific occurrence of it, can shift from being conscious to not being conscious and back again. Pains and auditory sensations, for example, can go on though we become distracted from them, though we cease having state consciousness of them. With distraction, they may not cease, whereas our state consciousness of them, in the form of higher-order thoughts, stops and may start again. And this is how it seems to us, that we are now conscious again of a mental state that we were conscious of before being not conscious of it for a while. Rosenthal would explain this proposed fact by means of the hypothesis that, under certain conditions, higher-order thoughts pertaining to a particular mental state may cease to occur and then they may occur again when those conditions change. If the target state is a cause of the respective higher-order thought that qualifies it as conscious, the target state may not be capable on its own of producing the higher-order thought or, if it is so capable, an added factor may prevent its doing so. Thus, the state consciousness of a mental state may be, as it were, turned on and off because its state consciousness is not intrinsic to it. Rosenthal (1990a) stated, "It is doubtful that we can explain such shifts between a state's being con-

scious and not being conscious if the property of being conscious is intrinsic to those mental states which are" (p. 49; cf. Rosenthal, 1990c, p. 24, where the point is stated more strongly: intrinsicity "in effect rules out" such shifts).

Con: But It Is Just Not True That Only Appendage Theory Allows the Nonconscious Continuation of a Mental State

It is clear that so long as it is the identical state that continues, it cannot be, according to intrinsic theory, conscious for part of its duration and not conscious for another part of its duration. Its state consciousness is intrinsic to it and does not wax and wane, as its intensity may. It would seem true that intrinsic theory does not conform to our pretheoretic intuitions in this regard *if these are as Rosenthal suggests*. But do these intuitions tell us that a mental state that persists into a nonconscious phase does literally itself continue? Or, rather, does the mental state "continue" only in the sense that the object experienced in the environment or body is the identical thing; for example, the same limb still throbbing with pain, or the same siren still wailing, since before one had been distracted?

It is not obvious what our common intuitions are in this regard. Relying on common sense, Malcolm (1984) went so far as to suggest, "I *could* say, 'The conversation distracted my attention from the aching [of my legs after a long walk]'; but this common way of speaking does not imply *either* that the aching continued *or* that it stopped" (p. 15). Armstrong (1984) disagreed with Malcolm: "The natural thing to say about this case is that the aching continued throughout the conversation, but that during that time Malcolm was unaware of the pain" (p. 125). Armstrong argued that, at any time during the conversation, if Malcolm had turned his attention to his legs, he would have found them still to be aching. Armstrong went on to reject the alternative that the aching of Malcolm's legs depends on Malcolm's having awareness of it: "Why should we suppose that making the check [on the continued aching] brings the ache into existence?" (p. 126). A good reason to so suppose is that distraction might function as a kind of anaesthetic, eliminating the aching itself for a time. Common sense seems to countenance this possibility; it allows us to say, as Malcolm (1984, p. 16) pointed out, either "Captain Horatio Hornblower found the keen wind so delicious that he was unconscious of the pain the hailstones caused him" or "Hornblower found the keen wind so delicious that the blows of the hailstones did not cause him any pain."

According to an intrinsic theory of state consciousness that accepts non-conscious mental states as well as conscious ones, the aching need not stop with distraction. Malcolm's legs may hurt during the conversation even when he is not aware of their hurting. But this is not to say that there occurs only one continuous ache before, during, and after the conversation. The legs

may consciously ache and then nonconsciously ache and then again consciously ache. It is only “the same ache” because it is the identical legs that keep on aching. Their aching need not consist of a single continuous unitary ache. There may occur distinct conscious aches and distinct nonconscious aches as the legs continue to ache. *Thus, intrinsic theory is in a position to acknowledge both nonconscious and conscious versions of the same mental state and these may alternate with each other, depending on factors such as distraction.* Intrinsic theory may take the form, as in Brentano, of ascribing consciousness to all mental-occurrence instances, but it may also take the form, as in Smith, of ascribing state consciousness only to some mental-occurrence instances.

Pro: Having More Fine-Grained Conceptual Distinctions Often Makes Us Aware of Fine-Grained Differences Among Sensory Qualities

According to Rosenthal (1990a), no other kind of theory of state consciousness, only higher-order thought theory, can deal with the fact that “having more fine-grained conceptual distinctions often makes us aware of more fine-grained differences among sensory qualities” (p. 40). Let us assume that the latter statement is indeed a fact, and that this fact can indeed be explained by higher-order thought theory. The question is *what aspect of higher-order thought theory gives to the theory its purported superiority over the other kinds of theory of state consciousness.* What is its crucial and unique ingredient in this regard?

Rosenthal explains that the higher-order thought theory expects that greater conceptual resources regarding our sensory qualities will result in “an expansion of the range” of one’s conscious mental states. Is this a matter of change in our state consciousness of these states or a change in the mental states themselves? Are we just aware of more differences among them, or are there also more actual differences among them (of which we can be aware)? The following passage points to higher-order thoughts as making for more fine-grained distinctions, while the first-order states remain as they were:

Vivid examples come from wine tasting and musical experience, where conceptual sophistication seems to generate experiences with more finely differentiated sensory qualities. The present theory predicts this. The degree to which we are conscious of differences among sensory qualities depends on how fine grained the concepts are that figure in our higher-order thoughts. The relevant sensory states may well have been conscious before one acquired the more finely-grained concepts, but conscious only in virtue of less subtle qualities. (Rosenthal, 1990c, pp. 24–25)

Con: According to Intrinsic Theory, All Conscious Mental-Occurrence Instances Have a Cognitive Dimension

Thus, Rosenthal would seem to be suggesting that only higher-order thought theory, among possible theories of state consciousness, ascribes to

the mind *a suitable conceptual dimension which can be affected by the individual's possession of greater conceptual resources*. Regrettably, Rosenthal did not point out how intrinsic theory, in contrast, lacks a means by which conceptual resources can influence state consciousness. In this regard, Rosenthal went no further than to say, "If consciousness is intrinsic to sensory states, the relevance of concepts remains mysterious" (Rosenthal, 1986, p. 350). He stated that it would be very difficult for intrinsic theory to explain "how learning new concepts can actually cause sensory qualities to arise that previously did not exist" (p. 350).

Surely, appendage theory, too, cannot explain how the latter might be literally possible. It is clear that, according to Rosenthal (1990b, p. 20), increased conceptual resources does not mean an increase in the actual number of different sensory qualities belonging to one's sensory states; rather, it only means an increase in the number of different sensory qualities *that one is able to be aware of*, the number of distinctions among sensory qualities that one can make in having state consciousness of the sensory states.

And surely, higher-order thoughts are not the only kind of mental-occurrence instance that involves concepts. If intrinsic theory is true, *all conscious mental-occurrence instances individually possess a cognitive dimension*, even those that are sensory states and may be said not to have an object, not to make us aware of anything else. They must have a cognitive dimension since, *ex hypothesi*, they make their owner aware each one of itself due to its own structure. Thus, each represents itself and, in the case of sensory states, may represent its own sensory qualities. This self-reference, or reflexive content as Smith (1989) would say, must involve concepts that each individual conscious mental-occurrence instance, as it were, applies to itself. And these concepts can vary in how finely they distinguish the kind to which the particular mental-occurrence instance belongs. Why should only Rosenthal's higher-order thoughts be penetrable by improved conceptual resources?

*Pro: Rosenthal's Appendage Theory of State Consciousness Explains How
Introspection Contributes a Further Higher Level Of Awareness*

In support of his theory, Rosenthal (1990a) adds an "argument from introspection," which will be familiar from earlier comment in the present article. While introspecting, we are not merely aware of having our particular mental-occurrence instance; we are also *aware of being aware* of them. When not introspecting, we are seldom aware of being conscious of those mental-occurrence instances that we are conscious of. Rosenthal claims that higher-order thought theory is able to explain how this happens: namely, by the occurrence of instances of state consciousness without any awareness that they are such instances—that is, without any awareness in the form of a yet

higher-order thought, which is about the higher-order thought that qualifies the respective mental state as conscious. When a yet higher-order thought does not occur, as it does in introspection, we are only aware of having our conscious mental states and not also aware of being aware of them, as we are in introspection.

Con: Do the Yet Higher-Order Thoughts Really Contribute to Rosenthal's (Modified) Appendage Account of State Consciousness?

What does Rosenthal's account suggest that one is aware of when one has a higher-order thought?

1. One is aware, of course, of the target mental-occurrence instance and, typically, of one or more of its properties.

2. This second item is something it seems to me that the appendage theory must include. One is aware, I suggest, of one's having the mental-occurrence instance *now* or *just now*. "Now" or "just now" must refer to the occurrence of the higher-order thought itself. "Now" or "just now" is simply when or just before when this very higher-order thought takes place. Without this temporal reference to itself, the higher-order thought cannot find its target as between various mental-occurrence instances of the same description that differ in when they take place (cf. Natsoulas, in press). This would mean that a pure appendage theory cannot work.

Very recently, Rosenthal (in press-a) has argued that a higher-order thought is an awareness of a particular mental-occurrence instance for the reason that it is about that mental-occurrence instance. And he would leave *how the thought is about the mental-occurrence instance that it is about* to a future, generally accepted theory of why any mental-occurrence instance has one intentional object rather than another. Rosenthal (in press-a) stated as follows about the kind of difficulty for appendage theory that I have raised (cf. Natsoulas, in press):

I'll argue that the proponent of the appendage theory should not be concerned with the difficulty. Mainly this is because the difficulty is a special case of a general problem that must be solved independently of any theory of consciousness. So it's a mistake to address the difficulty in the context of a theory of consciousness.

Presumably, Rosenthal is confident, as I am not, that the future theory of intentionality will make it possible for appendage theory to treat of the problem of how higher-order thoughts find their target *without introducing self-referential higher-order thoughts*, as Rosenthal (1986) once found it necessary to do for the same purpose. Let me continue on the assumption that Rosenthal will again come to believe that an appendage theorist of consciousness must address the difficulty I have raised (cf. Natsoulas, in press).

3. The reference to itself by the higher-order thought must be a reference too to oneself, as such, as having the target mental-occurrence instance. Without a reference to oneself as such, according to Rosenthal's (1986) theory, the higher-order thought cannot be about one's own as opposed to somebody else's mental-occurrence instance. Presumably, higher-order thoughts are each unitary and make only a single reference to oneself.

Therefore, it would seem to follow that, even before a corresponding yet higher-order thought takes place, a higher-order thought is already conscious. *One is already aware of being aware of the mental-occurrence instance, since the higher-order thought is intrinsically conscious.* What does the yet higher-order thought add to the account, if anything?

Of course, in order for it to find its own target, given Rosenthal's (1986) account, the yet higher-order thought, too, must be self-referential, referring both to oneself and to itself. And, therefore, it too qualifies as conscious, according to Rosenthal's theory. So, Rosenthal is in a position to suggest that the yet higher-order thought *gives awareness of one's being aware of the higher-order thought.*

If the above has no useful appeal to Rosenthal, he may want to hold, rather, that *introspection merely increases the relative frequency of conscious to nonconscious mental-occurrence instances by increasing the tendency of higher-order thoughts to take place.* When we introspect, we are more frequently conscious, in the sense of instantiating state consciousness more frequently. Given the above reasoning, state consciousness would always involve higher-order thoughts that each make one aware of itself as well as of the particular mental state that it qualifies as conscious.

Perhaps I should mention Rosenthal's (1989) comment: "Conscious higher-order thoughts normally distract us from the mental states they are about" (p. 22). I leave for another occasion drawing out its implications. For example, does introspection reduce the relative frequency of conscious to nonconscious first-order mental states?!

Con: Can Pure Appendage Theory Explain Our Immediate Awarenesses of the Sensory Qualities of Our Mental-Occurrence Instances?

Recall Rosenthal's (e.g., 1990b) rejection of a perceptual model for state consciousness, which I mentioned in an earlier section, specifically, Rosenthal's objection to the perceptionlike qualitative awareness of sensory qualities. Appendage theory postulates, instead, a nonqualitative state consciousness; thus, higher-order thoughts are themselves without sensory or any other kind of quality. However, Rosenthal did not specifically address how his theory can explain awareness of sensory qualities better than can intrinsic theory, which he acknowledged does seem to have the advantage in this respect.

Presumably, the argument pro appendage theory is that its pulling off this feat demonstrates power, its ability successfully to treat even aspects of state consciousness for which it seems unsuited. This particular explanatory feat is an unlikely one because appendage theory holds *state consciousness to consist entirely of thinking*. We manage not only, so to speak, to break out of our thoughts into the world beyond them, including our conscious mental-occurrence instances, but also to apprehend firsthand, *simply by thinking them*, subtle differences among our sensory qualities. How is this possible?

However, very soon we encounter in Rosenthal the claim that, although higher-order thoughts successfully qualify, among other mental-occurrence instances, sensory mental states as conscious, *our state consciousness of sensory states outruns our thoughts about them*. That is, there are dimensions of our sensory states of which we are aware though our higher-order thoughts do not have the conceptual resources to refer to them. Rosenthal (1989) stated,

Higher-order thoughts about sensations cannot capture all the variations of sensory quality we consciously experience. So higher-order thoughts must instead refer to sensory states demonstratively, perhaps as occupying this or that position in the relevant sensory field. (p. 33)

Does this not imply a partially perceptual model of state consciousness? That is, some of the qualities of our sensory states are conscious *not because we think them*, except as being "this" that we mentally apprehend in a perceptionlike manner. If we did not apprehend them more than merely conceptually, how could we know firsthand, as we are said to know, that our sensory qualities outrun our thoughts about our sensory states?

I say that Rosenthal's implicit model of state consciousness may be partially perceptual since, according to the theory, we *must be* aware of some quality of our sensory mental state, in order for this mental state to be conscious. Rosenthal (1990b) stated,

When a sensory state is conscious, . . . it is the sensory quality of that state we are conscious of. (p. 5)

When sensory states are conscious, we're conscious of some of their distinguishing properties [i.e., sensory qualities], and we use the properties we're conscious of to taxonomize sensory states generally [including the nonconscious ones]. (p. 15)

But such conceptual consciousness of a sensory state would seem, on Rosenthal's theory, to rest on grasping sensory qualities preconceptually or, at least, in a kind of perceptionlike way.

Another aspect of Rosenthal's discussion of these matters also suggests that state consciousness is not merely a matter of having a suitable thought about

a mental-occurrence instance when it takes place. According to Rosenthal (1990c, pp. 6–7), we categorize and discriminate firsthand among our sensory mental states by *appealing to what it is like to have them, and what it is like to have them is how they appear to us*. But if we distinguish sensory states on the basis of how they appear to us, we must be conscious not only of the states and their sensory qualities, but also of their qualitative appearing to us. Is such consciousness arguably a matter simply of classifying or conceptualizing a mental state? Or does apprehending how something is appearing to us necessarily exceed whatever thoughts we may have about it? *To think about how something is appearing to us would seem not to be equivalent either to its appearing to us or to our taking notice of how it is appearing to us*.

Further reason to think higher-order thought theory contains an unacknowledged dimension in which it resembles a perceptual model of state consciousness is revealed when Rosenthal (1990c) draws the analogy contained in the following paragraph:

Relatively weak conceptual resources will suffice for a higher-order thought to refer to one's own sensory states. We refer in thought to physical objects by way of their position in our visual field. It is natural to suppose that thoughts can similarly refer to sensory states by way of their position in the relevant sensory field. Something of this sort presumably explains how higher-order thoughts can be about sensory states even though conscious differentiation of sensory detail quickly outstrips our conceptual resources. (p. 23)

The suggestion is strong here that something like a perceptual process is involved in picking out the targets of certain higher-order thoughts. How else, according to Rosenthal's account, might one locate a sensory state in a "sensory field" so that one can have a higher-order thought about it in particular, as distinct from other particular sensory states? As in the case of physical objects, one thinks of the particular sensory state as the one that one "perceived" in a certain relative position. According to Rosenthal's modified appendage account, sensory mental states are apprehended in thinking of them and, also, in another more direct and less conceptual way.

Although Rosenthal describes higher-order thought theory as the only kind of theory that can explain the property of consciousness which conscious mental-occurrence instances possess and nonconscious mental-occurrence instances do not possess, he imports into his theory aspects of theories that he has specifically rejected. Among other things, Rosenthal needs to show how his higher-order thoughts can pick out their objects, purely as nonconscious higher-order thoughts, that is, (a) not as quasiperceptions which locate their objects in a sensory field and apprehend differences among some of their qualities nonconceptually and (b) not as intrinsically conscious thoughts which find their target by also referring to themselves.

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