Mind, Models and Cartesian Observers: A Note on Conceptual Problems

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Comment on "The Cartesian observer revisited: ontological implications of the homuncular illusion" by Alex Comfort (*Journal of Social and Biological Structures* 2, 211-223, 1979)

One of the stated purposes of Alex Comfort's recent piece — *The Cartesian Observer Revisited* — was to "start looking critically at the preconceptions generated by our experience of positional identity," which Comfort also terms "Cartesian positional identity." Although the particular end that Mr. Comfort has in mind is the application of new models in biology, the line of inquiry he has suggested is decidedly epistemological, and on this level the argument raises more problems than it recognizes. In general one may come away with the impression that Mr. Comfort's technique is more Cartesian than he admits.

The usage that the article makes of the adjective "Cartesian" is the first problem, for by equating "homuncular I-ness" with the position of the Cartesian observer the author has departed from the historical application of the term. This reinterpretation can be confusing for the reader who has not detected the shift, and dangerously misleading for the inquiry if it causes us to lose sight of the distinction usually referred to by the term (as it would appear, for example, in the phrase: "the Cartesian worldview").

Descartes, of course formulated his views on the bedrock of the positional identity of the observer, but he did not invent positional identity, nor did he exhaust its possibilities. He merely formulated the *latest* experience of consciousness to come along. Descartes may have assumed that his formulation generalized on all subject-object experience, but we are now privy to enough historical and anthropological information to know that such an assumption would be incorrect. If the history of human consciousness shows anything at all, it demonstrates that there are other ways of formulating the subject-object distinction besides our own. And this is a crucial point, for Mr. Comfort has used the term "Cartesian" to cover all forms of subject-object distinction, whereas it usually refers to but one form.

The particular form that Descartes formulated had, for its basis, the assumption of a total alienation between subject and object when those terms referred to mind and body respectively. That is, he supposed that all experience could be categorized under but two headings: experience of mental things and experience of spatially extended things. Thus he postulated only two substances: thinking substance and extended substance, mind and body. But unfortunately, since these were totally different substances, it was clear that mind did not reappear in body, nor body in mind. How mind could go about knowing a substance totally other than itself remained a mystery, and Descartes had to rest the matter with his argument that God would not create a physical world to which our ideas bore no relation. Few would care to embrace this solution today, but the felt alienation between body and mind

that Descartes was trying to describe is still part of our experience, and to the degree that we suppose such a total separation between the two we may be said to be Cartesian in the historical sense.

Mr. Comfort may well be using the term in this sense, but it is hard to tell, for he seems to assume that an epistemological inquiry into positional identity need recognize only two possibilities: Cartesian observerhood and oceanic unity. Now since *any* form of subject-object distinction departs from oceanic unity, as Comfort admits, his argument seems to imply that the only experience of positional observerhood available to us is that of separation of the observer from the observed. This is simply not true

Indeed, it need not have been true for Descartes either, although he did not notice the fact. There wee two impulses in Descartes' work, one leading to a total alienation between mind and its perceived objects, the other standing in direct opposition to this. Mr. Comfort has mentioned the *cogito* argument by which Descartes attempted to find a first principle of knowledge. It deserves more than a passing reference, for this mode of reflection has led, since its inception, toward a subject-object experience that is quite different from the total alienation of the Cartesian form.

The argument, usually translated a "I think, hence I exist" (for "cogito, ergo sum"), rests upon the impossibility of doubting the first proposition — "I think." Doubting is, of course, a form of thinking, and to entertain a doubt is to affirm the reality of that thinking. So much for the activity of thinking itself. As to the "I" who is doing the thinking, Descartes was unclear, and it was left for Fichte and Hegel to make that aspect explicit. The concept "I," they argue, is for the thinking process that entertains it a self-reference — that is, through this concept the activity of thinking thinks itself and becomes self-conscious. Thus, the meaning of the concept "I" is a self-conscious thinking process, or a thinking that refers to itself. Now, since thinking must be present to make any reference at all, and since this particular reference refers back to the thinking that makes it, it becomes impossible for the claim "I am" to be incorrect. The claim that "I am" demands, in this treatment, only that "I am a self-conscious thinking process." A self-conscious thinking process is only, however, a thinking that refers to itself, and since this is exactly what the concept "I" performs, the entertainment of this concept makes an "I" (a self-conscious thinking process) out of any thinking that entertains it. Any further meaning of the term such as "I am a man, living in France, etc. " is still to be demonstrated, as Descartes noted. The *cogito* argument points only to the irreducible minimum of I-ness.

This minimum is irreducible because it refers, ultimately, only to thinking itself. If thinking is present, it can be made self-conscious, and therefore made into an "I." When we reflect, however, on the nature of experience, it becomes obvious that thinking is always present to any experience, in that experience is only experience for thinking. This insight, stressed particularly by Kant and post-Kantian philosophy, can be recovered through a reflection on what we mean to indicate by the term "experience." We say, for instance, that we have a certain experience of the world — others may have other experiences, but that is their concern, our business is with our experience. Thus, built in to the concept of experience, we have the location with a particular mind. Our own experience does not necessarily match another's, and therefore our experience is not to be equated with reality per se.

When I want to be very accurate, I do not point to the objects about me and say "this is how they really are." I am modest, venturing only, "this is how they appear to me." That is, this is the nature of my experience of the world, not necessarily of the world itself. Through the concept of experience we distinguish between the world as it is for us and the world as it may be in itself. Our experience of things is constituted, in part, by what we take them to be, and it is this "taking," or sometimes "mistaking," that forces us to recognize the distinction.

The reader not familiar with this form of thought can make it concrete by a simple exercise. Everyone is familiar with the "double-take" by which we "look again" and discover that we "took" something wrongly the first time around. We correct through the second try — the second half of the "double-take" — and, being assured that our present experience is the right way to view the matter, sit back and forget how we came by that experience. That is, we do not maintain, for our consciousness,

the fact that the process by which we came by the wrong "take" is the very same activity of "taking" by which we arrive at the present experience. Yet in the case of the "double-take" it is clear that the second try was, if anything, even more active, and more self-consciously active, than the first, because it was an attempt to reconstruct the appearances. If the original construction was due in part to our own activity, certainly the reconstruction is also. Even so, readers who are familiar with any of the shadow-projections of a Neckar cube (a cube constructed of wires) will remember that these projections can always be seen in at least three ways: as a flat pattern, as a cube viewed from one angle, or as a cube viewed from a second angle. This viewing is not an interpretation that takes place after the fact of perception, but part of perception itself. We do not "think about" the appearance in order to get three different interpretations, we actually construct, or think, three different appearances, or take the sensory input in three different ways. This kind of thinking does not merely elaborate an experience, but actually constitutes it to a large degree. Once we are aware of this active contribution to perception, we can never again suppose that our perceptions, the appearances presented to our consciousness, are innocent of our thinking and can therefore be abstracted from it.

But if this is indeed the case, then the world "out there," the world extended in space, is no more separate from mind than the world of thought. We may not originate our sensations, but we have a great deal to do with how they are formulated. And space itself, and the dimension of depth that represents, for the human observer, the very "outness" of things, is a formulation like any other — no more separable from thinking than any other. Depth is, by the way, a very good example, for the "image," if one would like to call it that, on the retina of the eye is essentially flat. The depth we see is a construct of our minds, and as such, anything but a true separation between us and that which our minds have placed "out there." It is, as all spatial differences are, an indication of distinction but not, unless all of the above is forgotten, of separation.

The fact that Descartes did not follow out this implication of his *cogito* argument but took perceptual "outness" as a measure of separation led Edmund Husserl to remark that Descartes has missed the import of his own discovery. (This argument is explained very lucidly, and very differently from the manner in which I have presented it, by the writer of the article on Cartesianism in the thirteenth edition of the Encylopaedia Britannica, who brings out the internal contradiction within Descartes' work in an exemplary way.) Husserl made up for that omission, as it were, by the development of his own Phenomenology, an approach in which we come to understand, and experience, the conceptual or "intentional" structures by which we formulate appearances. (Husserl's term for the "taking" activity is "intending," and thus the phenomenologist says that we "intend" this or that formulation of appearances where I have said we "take it for" this or that. "Intentionality" becomes, in this locution, a name for the form of thinking by which we formulate sense appearances.) And, of course, within such a framework, the subject cannot suppose any *separation* from the objects of consciousness, while the recognition of a distinction is impossible to deny. Both points follow from the same argument. The observer cannot separate himself from his experiences, for they are manifestly his experiences — but just because he knows this, he also knows that they are distinguished from him, that there is always a necessary distinction between that which is conscious, and that of which it is conscious. All distinctions are at the same time relations — the observer is bound to his experience by the very same relation that makes him distinct from it.

We have, therefore, arrived at a subject-object relation that escapes Comfort's dichotomy, and at a viewpoint from which it is possible to point out just how necessary the "homuncular illusion" is. Following the argument above, one would conclude that the alienated observer, the self that takes itself to be totally other than its objects, is indeed an illusion — one that can only be maintained through ignorance of the intentional contribution to perception. But on the other hand, the positional observer, or individual thinker to whom things appear, seems to be very necessary, and not at all what one might term an "illusion."

The Greek word for "truth" is *alethia*, which, in a direct translation becomes "no" (a-)

"forgetfulness; hiddenness; veil" (lethe). The metaphor is familiar to us. A veil conceals, distorts — that which is veiled does not appear as it really is. Appearance and reality may coincide — so the suggestion goes — when no veil intercedes, but not otherwise. So familiar is this underlying structure, in fact, that I like any other speaker in our culture, have assumed it from the first. We all understand that "matters as they seem" *may*, or *may not*, coincide with "matters as they are" — that the way things appear "for us," may or may not be identical to the way things are "in themselves." If we did not understand that things could be other than they seem, we would not understand the concept of *falsity*, and could be said to have lost the ability to doubt. I am relatively certain that none of my present readers will be found lacking in this category.

But it should also be obvious, at least after a moment's reflection, that this ability to doubt is founded upon the prior ability to distinguish the concepts of appearance and reality, and that, in turn, the distinction between appearance and reality *is made possible by the prior distinction between subject and object*. The concept of appearance requires a distinction between *what* is appearing and *to whom* it is appearing. After all, we must have somewhere for the veil of the metaphor to go. Without a distinction between observer and observed, we have no place to put the action of the veil, which is supposed to occlude the latter from the former. The same point is recognized in the concept of *experience*, through which we distinguish our "experience" of a reality from that reality "in itself," and thereby recognize that experiencial appearances are all "for us" — for an observer distinct from the observed. The ability to doubt, therefore, rests upon the subject-object distinction, without which thinking would simply be unaware of itself.

If we propose that "I-ness" is an "illusion" it would seem that the argument is a nonstarter. An "illusion" is, by definition, an appearance which seems other than it is. In order for this to happen, something must appear to a subject in a veiled manner, leading that observer to "mistake" the object. Well, if "I-ness," by which I mean a self-conscious thinking process, is an illusion, who is deceived by it? And if no subject, or individual thinking process exists, what made the mistake? We cannot have it both ways. If an illusion exists at all, then a correspondent thinking process must exist to perform the mis-taking. And if the "I" concept is thinking's grasp of itself, then this grasp cannot itself be an illusion, but is rather the necessary ground on which we postulate the difference between thinking and being, appearance and reality. To call it illusion is to fall into self-contradiction.

Well, since it turns out that the presence of an "I" is the very ground upon which we detect the possibility of illusion, we may now drop any challenge to the reality of "I-ness," understanding that all such challenges could only be mounted from the very platform they propose to question. (This self-contradiction does not prevent such claims from being advanced, of course, and it takes time to think things through. In a classroom discussion of "social constructs" I was surprised to hear a student propose that perhaps the concept of a "society" was but a "socially constructed illusion." It took the class several minutes to explode.) Comfort has not explained, at least in epistemological terms, what he meant by the "homuncular illusion," but if one assumes that he meant the individual thinker, he is simply wrong. There are, no doubt, multitudes of illusions that any individual thinker may hold about himself and the world, but that he exists and entertains these views is not one of them.

Related problems appear when we turn to oceanic experience. Minimally, this is defined as a state in which there is no separate observer, or no subject-object distinction. But when we consider that oceanic states are investigated either through direct experience or through the reports of witnesses, we must admit the observer is *potentially* present during the experience. After all, our witness can be a witness just because he advances the claim "this happened to me." Any experience happens *to* someone. Thus the witness to any experience must advance a claim to observerhood in some sense. It makes no difference that the person was not immediately self-conscious at the time. I may report, for instance, upon a dream in which I did not appear, but I report it as *my* dream because upon inspection of the memory I see that I was present as the thinker — or "taker" — even if I was not aware of myself during the dream. The dream is, essentially, *my* "taking." Even so, oceanic experience is a "taking"

which does not bother to distinguish the "taker" or thinker, but if I claim that it was my experience I claim that I was still there all the time.

Upon closer examination, the mode of experience we are calling oceanic is hardly unusual, and one must introduce a confusion to make it so. In *normal* experience we eclipse self-consciousness whenever we enter deeply into any event or idea. At such a moment, self-consciousness is nowhere to be found . . . it has metamorphosed, rather, into the thing thought or observed (or intended). Thinking or intending, or "taking," is indeed present, but since this intentional activity focuses upon something other than itself, no self-consciousness obtains. The "I am" remains a potential while we enter into other matters, but can be actualized at any moment by a shift in focus from that which is thought of to that which thinks. In this sense the thinker is somewhat related to the dreamer, but with a crucial difference — the thinker may actualize self-consciousness at will, the dreamer cannot.

If we are really concerned with overcoming the Cartesian subject-object split, it ought to be of some interest to us that in normal perception this split is not present. Every day we enter into "oceanic" unity with the object of thought, eclipsing the separate self entirely for the duration of the entry. Of course, when we return to self-consciousness, we return as well to our ordinary habits of thought, and to the Cartesian *premise* that thinking is something quite separate from the thing thought. But this illusion — and that is certainly the name for it — is not the result of an examination of experience but of a preconception embedded in our world view. When I pointed out, in my test case above, that each image of the Neckar cube represented a separate "taking" by the thinker, it should have been obvious that no image could exist that was not the result of a specific intention. This is what the phenomenologist means when stating that intentional structure "constitutes" perception. Yet how many of my readers made, at that point, the obvious inference? If I may judge my audience myself, I would suspect that very few went so far. We are so used to presupposing that our mental activity merely thinks *about* perception, merely adds something like a commentary, that the notion that it might in some way become one with its object is generally suppressed, even when it lies but one logical step away.

Most moderns are beset with difficulty in approaching the idea that the separation of thinking and the thing thought could be anything but a self-evident truth. And they are right, of course, if by "thinking" we mean only the weaving of sentences about this or that subject, but if we point at the intentional function the situation is radically changed. Of course, one of the peculiarities of our Cartesian outlook is to stress the statement form of thinking and ignore the intentional form, but perhaps this habit can be altered now. The shift would bring us into line with certain forms of pre-Cartesian thought, which have always seemed rather nonsensical to the "modern mind." Aristotle suggests that at the moment of theoria, the mind becomes what it knows: "mind, as we have described it, is what it is by virtue of becoming all things" (De Anima 430a); "actual knowledge is identical with its object" (430a); "in every case mind which is actively thinking is the object it thinks" (431b). This seeming awareness of the intentional function is continued through medieval scholastic realism from its inception in Scotus Eriugena: "the inner idea of things, present in the mind, is the substance of the things of which it is the idea" (On the Division of Nature, Book IV, 7), to its encyclopaedic summary in Thomas Aquinas: "thinking in act is the thing thought, in act" (Summa Theologica, 1a, Qu. 12, a.2.3.), "The soul is in a manner all things" (1a, Qu. 14, a.1). Shortly after these last statements the rise of nominalism would lay the groundwork of the Cartesian split, and the premise of the separation of mind and object would hypnotize Western thought for several hundred years. The whole development seems rather odd, for it is to be presumed that any child recognizes how often we are "lost in thought" or in

The only unusual aspect of the "oceanic" experience that Comfort describes seems to be our inability, while within it, to return our focus to the thinker. When this is done, upon "waking up" from this dream-like state, we unfortunately return to our Cartesian assumptions about that thinker as well. That is, we propose that the lack of separation between subject and object during the experience is a

unique element, since we are forgetful, due to our assumptions, that this very lack of separation characterizes all thought and all experience. When we remember this it becomes clear that we must ask ourselves whether it is the unity of thinking with its object or the inability of thinking to focus upon itself that we really value. The former has never been absent.

I am not suggesting that we take up, today, Greek or Medieval world views, but that we find out what the insight into intentional functions that pervades these views can mean to us. The issue that I have raised with Comfort's estimation of "oceanic experience" really turns on whether we are speaking of a *lack* of the power of distinction or a surplus. We may fail to distinguish things which *can* be distinguished through a lack of awareness, but no positive claim can legitimately come of this. On the other hand, we may discover an identity where we previously thought there was total separation by an increase in awareness. This is often the case when we examine polar concepts — left and right, plus and minus, yes and no, and subject and object. These poles are distinguishable but not separable for each has its meaning only by the grace of the other. I think it unnecessary to work out the possibilities for subject-object unity arising from the discovery of polarity. It is enough that there are possibilities, and that no contradiction is implied. We see the unity of polaric concepts while maintaining their distinction.

Of course, my argument up to this point has really focused upon the claim that the self-conscious self might be illusory, and the sort of evidence that claim might be based upon. I may be misreading Comfort to detect such a claim in his discussion, but whether or not the notion is present it seems clear that the discussion had proceeded without the requisite caution, and even on the basis of the very view that Comfort is contesting. This point will become even more apparent upon consideration of one further aspect of Comfort's paper.

When referring to the long-term "philosophical debates" that have always accompanied serious study of mind function, Comfort suggests that these theoretical matters may be on the eve of solution, and this through experimental data. While Comfort's sense that something is about to happen is very valuable — it is perhaps such an attitude which *makes* things happen — I find this hope that epistemology will be settled by experiment rather naïve. That an "experiment" is an artifact of prior theory is well enough argued, by now, that one would expect to see the author preparing for a confrontation with any number of current writers (Kuhn, Popper, Polanyi, etc.) if he has another position. But the argument is not even taken up, although another position is implied. This oversight could well be indicative of something thematic, for what we fail to mention we may also fail to see.

One of the more frustrating aspects of a philosophic position is its near invisibility to its adherents. Cartesianism is, for the modern world, a position that is no position, for it is rarely distinguished from reality — from matters just as they are. The trouble stems from the fact that matters as they are *seem* Cartesian to minds that accept Cartesian premises, and we do. Even so, Mr. Comfort may not have noticed that the elements of his empiricism may be artifacts of such premises, that the very *thinking* which relates one thing to another in his article may rest on such a theoretical basis, but many passages suggest this conclusion.

Take, for example, the central argument upon the holographic model of brain function, which brings out the problem in an exemplary way. Considering the Pribram holographic model, Comfort speculated that the oceanic state might be understood by assuming that our perceptual input was analogous to a hologram, and our brain activity to the scanning laser beam:

On this model, what we normally experience could be the scanned state of the interference-pattern generated in the brain by sensory inputs and by its own activity. In the oceanic or "I-less" mode of perception, the scan could be shut off, and what is intuited would then be the interference pattern itself.

Our only contact with a "real" world is by way of the sensory inputs we receive from it, and the conceptual and classifying processes which go on in the brain. If both of these are expressed in some form of interference-pattern, oceanic states may represent a trick by which this pattern is monitored without being interpreted: in this case the processes connected with our sense of the objective would be of a piece with the rest of the hologram, and the positional "I" would in fact be seen as containing the information of the whole, like any other subdivided hologram. Switch on the scan again and the separate objects and concepts would once more be seen as separate.

Upon reflection, the brilliance of this analogy fades before an old but very persistent objection. I have argued, above, that since all experiences are "intended," all participate in intentional or conceptual structure (which terms are interchangeable if by "concept" we mean the structure of intention by which consciousness "takes" the percept and not something we denote in words), and thus all are contexted by mental activity. The "naive realism" of our day tends to forget this, and to contradict its own notion of experience by confusing the objects of experience with something entirely separable from mind, even as Descartes supposed extended substance to be separable from mental substance. This same contradiction appears to be contained in the quote, and produces an infinite regress similar to the one termed by Aristotle the "third man" fallacy.

The argument goes like this. Suppose we say that any two men are the same in as much as they are both judged to be men. Then we can argue that there must be a second type of "man" here, namely the conceptual structure that provides a standard for "being men," or our concept of man. So we have not only the objects men, but also the concept man, and it is by reference to the latter that we postulate the relation between the former. All individual men resemble each other in that each is a representative, for the mind, of the concept man. So far, so good. But now another relation arises which is not yet explained. The individual men are related to each other by means of a concept, but how is the concept related to those individuals? If we take the simplest route and suggest that the concept man is merely an object that all men resemble, then we can say that any two men resemble each other because they both resemble the concept. But this will lead to trouble, because we must now ask by what standard we judge the resemblance between the concept *man* and an individual man. After all, we originally postulated the second type of man — the concept — in order to provide a standard of judgment which could handle the first level of relation — i.e. that between individual men; we now need a third type of man to act as a standard by which to judge the second level of relation — that between the concept man and a man. And, of course, we could not stop there. We will then need a fourth "man" and a fifth and so on ad infinitum, because we have entered an infinite regress.

Why does this happen? A careful reflection on the matter will reveal that by allowing our concept of man to relate to men through mere resemblance we have reintroduced, within the explanation, the very relation that our account was meant to explain. With every jump to a new standard by which to explain resemblance on a new level we simply admit that we cannot explain it at all. Our infinite regress is an endless qualification which, because it can never finish, never does the job. Well, Comfort has not made a "third man" argument, but the problems that his text gives rise to are quite similar. Let us examine it with the above example in mind.

We must remember, to begin with, that when Comfort writes of the hologram model of brain function he is attempting to solve a prior problem — he is speculating on the relation between oceanic experience and normal experience. He puts forward his comments as suggestions which may begin to explain how the brain can function in both modes — i.e. oceanic and normal. Thus we have two types of experience (his model suggests that we must call them that) on the subject level, and two modes of function on the mental level. On the hologram model, the mode of normal experience is taken as the result of the scanning beam, and the oceanic mode the result of perception without the beam. Parallel to the action of an actual scanning laser beam upon an actual hologram, the mental scan gives rise to distinct images where prior to its activity there was only a continuum without clear edges. Notice that the scanning beam and the hologram text are very different things, and that it is only upon this

difference that we presume to explain the transformation from the continuum to the distinction stages — i.e. when a new causal parameter is added to the hologram text (the scan) it takes on a new appearance (distinction stage). Thus the *model* presumes to explain the arising of distinctions for the mind by *distinguishing* the activity of the mind from the text that it works upon. The infinite regress is now in sight.

Since all clear distinctions in the world arise through our scanning activity, the distinction between an actual hologram and its scanning beam can be no exception — this also is an artifact of our own scanning activity. But now we take those two distinct items, beam and text, and try to explain *distinction* with them. Well, since the two must themselves be distinct in order to provide an explanation — the scan must be separated from the hologram to explain the continuum and added to explain the distinctions — we have allowed the very thing that we were supposed to be explaining to creep into our explanation . We are using distinction to explain distinction. The infinite regress is easily generated from this situation by noting that we now need an explanation of the distinction between the elements of the model. Once we start on that path we can never stop.

I anticipate, of course, that Comfort and/or my readers will object, at this point, "but it was only a metaphor!" It is indeed obvious that this account of brain function does not demand anything like an actual hologram and a laser scan in the brain, but only something that functions in an analogous manner. Fine, but if the account is a metaphor, what is a metaphor for? The Greek metaphor focuses only upon mental experience — forgetfulness, hiddenness, or the quality of seeming veiled. These are qualities of experience and the term *alethia* merely points at them and adds a negative. The device serves to focus the mind upon what it means by "truth," but does not pretend to reduce mental experience to something that is not experienced. But when we come to the hologram, are we not proposing that there exists, in the brain, two elements that are properly *separated* in the manner that a hologram and its scanning beam are separated, even if they are not the same as the hologram and beam? Must they not be partakers of the sort of separation that the account assigns to the activity of the "scanning beam" of the model, like every other distinct item in the world? And how can this sort of separation exist prior to the action of that "beam"? The model is drawn from the very level which is to be explained by it, and bears with it the conceptual relations of that level. Since it is the conceptual framework that is to be explained (the framework of distinction), any model understood through the conceptual framework of the first level cannot be used to explain the conceptual framework of that level — not, that is, without allowing the explanandum to show up in the explanans, the item to be explained in the explanation. If this is not the way in which to interpret the account of brain function under examination here I must admit that I do not yet see an alternative. If the hologram-beam metaphor is meant to describe something which is quite unlike, in its conceptual relations, the model itself, how are we to read it? I can see no way out of the difficulty.

The difficulty arose, however, when we selected a model for mental function which made those functions similar to those found on a phenomenal level. The phenomenal level, the world of familiar appearances, is always contexted by mental structure (intentionality), but just because this is so, we see that such structure must be quite dissimilar from that found at the phenomenal level. After all, if *all* phenomenal structure is contexted by intentional structure, then since text and context are dissimilar, intentional structure and phenomenal structure must share the same difference. I can agree, therefore, that we may speak of mental operation in the form of an activity that contexts what we see, but we cannot treat that context through an *objectification* — a treatment that assigns its subject matter to the level of an object among objects, and in this case reduces context to text. Such a reduction only leads us to an attempt to explain the context of our new text, and thence by easy repetitions to infinite regress. We cannot think that which contexts in the same manner as we think that which is contexted — context cannot be reduced to text. Such a conclusion implies, as well, that context cannot be modeled by text. I am afraid that this is correct. We can never explain conceptual activity by reference to conceptualized objects, for the latter are already artifacts of conceptual activity. Operations of this

sort only take the action of the concept for granted when the whole purpose was to investigate it.

These results are not indications of paradox. The conceptual realm is not beyond investigation, but it cannot be approached through any form of objectification, since this mode of thinking, by definition, works only with conceptual artifacts — with the text. Normal thought is tempted to believe that objectification is the only route to clarity because normal thought in our age is entirely Cartesian, and the loss of the concept within "reality" is the most important illusion of a Cartesian outlook. When Descartes contradicted his own *cogito* argument by supposing "extended substance" to be entirely separate from "thinking substance" he laid the foundation for the troubles I have examined above. Such an objectification of mind suggested that mind could be separated from its objects in the manner that those objects are separated from each other. But mind is not an object among objects, but a contexting activity that is necessarily present to all its objects. It is the muddled habit that leads us to take mind, or its conceptual structures, as objects among objects, that provides the foundation for Cartesianism in our day and sends almost all modern thought into objectification, despite the trouble with recursive functions that this creates.

Actual investigation of the conceptual contribution to perception begins, at least for modern biology, with Johannes Müller's *Handbuch der Physiologie des Menschen* (1837), which treats the intentional component of sense-processes. Müller was influenced, in this respect, by Johann Gottlieb Fichte (1762-1814), who was a founding figure in German Idealism, But Müller's students, a group including Schwann, Virchow, Henle, Remak, Kolliker, Du Bois-Reymond, and Helmholtz, ignored the idealistic side of his work. This aspect was recovered, for modern times, through a totally independent tradition when Edmund Husserl worked out the techniques of intentional investigation for his phenomenology. Even before Müller, however, we find Goethe utilizing intentional investigation to study biology and color rather than perception *per se*. There has been almost no follow-up on his researches, and most commentaries on them suffer so from an objectified mode of thought that they are all but useless. Yet work such as Goethe's or Müller's, or more recently that of Husserl or Heidegger, provides a good critique of Cartesian objectification and offers a way out. If nothing else, readers who do their homework in phenomenology may learn how to identify the actual root of Cartesianism in their own thought, which identification is a necessary prelude to doing something about it.

The Cartesian "split," by which I mean the separation of mind from its objects after the manner of separation of objects, has been the basis of Western thought since the eighteenth century, with few exceptions. The Romantic rebellion attempted to overthrow it, German Idealism found ways to correct it, modern phenomenology has taken up cudgels again, but it is still alive and well in most quarters of Western intellect, and twentieth century science has become its bastion. The irony of the situation becomes particularly acute when we find concerned scientists, like Comfort himself and a number of others whose uneasiness with the Cartesian world is becoming known, attempting to pass beyond Cartesian limitations with Cartesian tools. The habit of objectification is not easily shaken, and cannot be shaken at all until it is targeted. Once this happens, it becomes obvious that further movement depends upon the development of a form of thought which can investigate the intentional realm immediately, since the mediation of modeling, for instance, simply reintroduces the objectification we are seeking to transcend. This task is not within the provinces of "normal consciousness," but since that consciousness is merely a historically locatable form of thought, I see no reason why that point should give us pause. Conventional models lose the advantage of conquered ground and begin to act as prisons when we forget that we may depart from them.

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