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Chapter 10

Consciousness, Communities and the Brain: Toward an Ontology of Being

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When we consider the question of consciousness we must, first of all, take ourselves and our own consciousness into consideration. We cannot consider the subject of consciousness apart for the fact that we ourselves are conscious. To do so is to ignore the impact of our own consciousness on our conclusions. If we ignore our own consciousness it may seem that we are drawing objective conclusions about consciousness, but we may merely be caught in our own preconceptions. The features of the world that we take as given may be conditioned by our state of consciousness. The only way that we can know if this is so is to begin to take our own consciousness into account. As we do so we will begin to recognize connections between what we take to be reality, the communities to which we belong, and our state of consciousness. A reality/community/consciousness system will emerge. A system that I will refer to as a being.

This paper considers how our participation in communities of human beings can influence our state of consciousness and our

perception of what is real in the world. In this sense, I am seeking an interpersonal theory of consciousness[1].

Theories of Consciousness

Many contemporary theories of consciousness place consciousness on, in, or associated with some external aspect of the world (some object or process) that is taken as the given bearer (or correlate) of consciousness (see Chalmers, 1997). This aspect of the world is then, *a priori*, taken as the basis for the phenomena of consciousness that the author is trying to explain. Often this aspect of the world is the physical brain, or some aspect or state(s) of the brain. In these cases, the question of consciousness becomes a question of how, or if, the brain forms the basis for consciousness. In either case, the brain is taken as a potent physical object whose manifestation is, or might be, consciousness. What remains unexamined in these theories is the role of the investigator's consciousness in creating what he takes to be the physical brain. In this sense, most investigations of consciousness are incomplete. They deal with consciousness as caused by or correlated with some other object (or process) without dealing with the role that consciousness plays in the creation of these objects (or processes) (Newman, 1997a, b; Churchland, 1985). Thus, the foundation upon which most theories of consciousness are based is unsound. These theories assume that consciousness plays no significant role in the creation of the conditions that they take as determinative of consciousness. This is not an assumption that should go unchallenged.

Taking Consciousness Seriously

How can we take our own consciousness into account when we consider the nature of consciousness? At first it seems impossible. Can

[1]Burns and Engdahl (1998) undertake a similar project. I only became aware of their work a year after completing this paper.

we take our own consciousness into account in our theories? Can consciousness explain itself? Let me approach these questions obliquely, beginning with a consideration of our experience of ourselves in our normal waking state of consciousness.

When, in our waking state of consciousness, we turn our attention inward we see not just our self, but what we have come to know as the objective world as it is reflected in this self. When we look into our self introspectively we always become aware of a specific content which, at that moment, constitutes our experience of our self. Our direct experience of our consciousness is always as consciousness of something (Husserl, 1913/1962).

If I pause in my writing, close my eyes and turn my thoughts inwards, I am aware of not just a sense of myself but of a specific content that is unified with (and by) that self. I am aware of pressure from the chair on which I sit; of a patterned darkness that I have learned to associate with closed eyes; of the pressure of my muscles and the dull pain in my stomach; of images of trees and people and objects that flit through my consciousness; of feelings of fatigue and worry and contentment that somehow all exist together; of myriad remembered sensations, feelings, experiences that form the content of my momentary consciousness and are unified through my memory and sense of self. Through experiences such as these we become aware of our self as someone who is in constant intercourse with the world. We are not unitary monads who bear our own essential being in ourselves and who stand apart from the world. Rather, when we consider ourselves, we immediately come into contact and relationship with the things, events and people that surround us. We experience ourselves as intentional beings. We are never without an object of our consciousness, though the attainment of this state is the goal of some forms of meditative training. In this light, to take our consciousness seriously seems to mean to take these other aspects of the world seriously too. We can not take consciousness seriously if we do not also take the content of consciousness seriously. Our normal assumption is that this content is a reflection of a preexisting physical world. Does this not lead us back to reconsidering the objects of our world to be *a priori* given? Are we not back to the problem that I suggest plagues most theories of consciousness?

As long as we theorize about consciousness as if it were a unitary state we will be faced with questions of the *a priori* reality of the world.

From a perspective of a unitary consciousness, the evidence points toward the existence of the world prior to my conscious awareness of it. This world seems to be communicated to my consciousness as a given that shapes my experience.

But our consciousness is not unitary; it is legion. The perspective that takes the physical world as preexisting and prior to our experience, is just one of many possible perspectives on our relationship to the world. It is a perspective based on a hypothesized unitary state of consciousness. If we begin to question this hypothesis, the world begins to look less like an *a priori* given and more like a multiplicity of potentialities that we instantiate into perceptions through our activity in various states of consciousness.

Daily States of Consciousness

During the span of 24 hours we are subject to a great range of conscious states. During the night we alternate between the states of dreamless and dreaming sleep (Farthing, 1992). As we wake up we pass though, or even linger in, states of consciousness between sleeping and waking (hypnopompic period; Tart, 1969 p. 75). We are aware of some but not all of the perceptions that we have when fully awake. In these states we may have dream-like sensations in which environmental stimuli are incorporated into our half-dream, half-waking consciousness. At some point we become fully awake and experience our surroundings in what we consider to be our waking mode of consciousness.

Once awake we experience many different states of consciousness during the course of a day. Our awareness of ourselves is different while we are writing, speaking in front of an audience, eating, and sitting quietly and thinking. In all of these experiences we retain a core sense of ourselves, but we come into relationship with this core in quite different ways.

The fact that our consciousness varies in these ways can be illustrated by a very simple experiment. Sit quietly with your eyes open in a place where you will not be disturbed for a minute or two. During this time pay attention to your experiences as you inhale and exhale. You should notice a subtle increase in your sense of self on inhalation and a subtle increase in your sense of your surroundings on exhalation.

Inhale - self; exhale - world. We live in this rhythm of consciousness but are seldom aware of it. It is a simple example of the complexity of the changes in our consciousness that take place throughout the day. Neither our sense of self, nor our consciousness is unitary. We pass through many different conscious states, yet somehow retain a connection with this abiding memory/perception/thought that we call our self. We retain this connection while our conscious states come and go. This connection allows us to talk and act as if we had a single state of consciousness when in fact we have many.

Non-Self-Conscious States

Up to now I have been writing as if all of our conscious states were self-conscious. In reality, many of them are semi-conscious or unconscious. We interact with the world in a variety of ways in which we do not come to consciousness of ourselves. Although they are unconscious, these interactions may often be more immediate, authentic, and valuable to our survival than our conscious states. Despite this we tend to ignore our unconscious or semi-conscious states when we conceptualize our day to day activities. We also tend to ignore them in developing theories of consciousness. Here I will explore only one or two aspects of our unconscious experience to make my point.

If we restrict our discussion to our immediate experience of our everyday lives, we see only a limited number of examples that we can call semi-conscious or unconscious. These examples have to do with our reactions to the events that take place around us.

More dramatic examples of unconscious processing come from the study of hypnotism (Braude, 1991). Although hypnotic states are not parts of our normal waking consciousness, their existence illustrates a potentiality of our consciousness. We have the potential to enter states where we perform seemingly normal actions but are unconscious of them, both while carrying them out and in retrospect. Some of the most striking examples of this come from the field that Binet (1896) calls systematized anaesthesia, or unconscious perception. In unconscious perception a hypnotized subject is directed to ignore some phenomenon in her environment (for a more current review of unconscious perception see Merikle and Daneman, 1998). Upon being woken from the hypnotic state the subject fails to see the object that has been

"suggested away." The lack of perception is so acute that, if a person has been suggested away, the subject becomes almost completely insensible to the actions that this person performs. These actions can include sticking the subject with needles to a depth at which they adhere to the skin (Binet, 1896). Although the subjects are seemingly awake and aware during this process, they perceive neither the sensation of the pricking nor the person who performed it. However, if another person whose presence has not been suggested away performes the same action, the subject immediately feels the pin prick and often cries out. In systematized anesthesia something happens to change the subject's perception of, and response to, stimuli. Portions of the external world cease to exist for them.

A second set of examples concerns the perception of colored figures and after images while under hypnosis. To understand these experiments first recall the well known example of colored after images (Hurvich, 1981). To experience a colored after image first stare at a brightly colored shape on white paper, say a red triangle in the center of an otherwise blank page. After staring at this image for a several minutes look away at a completely blank, white page. Most people will see a complementary colored triangle on, or floating above, the page. If you began with a red triangle, the triangle in your after image will be cyan[2].

Binet's (1896) experiments with after images were conducted by first hypnotizing a subject and suggesting away a red square drawn on a piece of paper (Binet, 1896 p. 300). The subject was then woken and asked to stare, for some minutes, at paper with the red square on it. Of course they did not see the red square. They saw only a blank piece of paper. Their hypnotic suggestion prevented them from seeing the square. For the first minute or so their vision of the blank piece of paper persisted unchanged. They saw only a blank piece of paper. After a few minutes a cyan square gradually appeared on the piece of paper. The sensation of this complementary square persisted as long as the subject looked at the "invisible" red square.

I will quote Binet (1896) for one final example of unconscious perception and for a brief interpretation of these surprising results.

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[2]Binet (1896) refers to this complementary color as "greenish." However, if it were really complementary to red it would be cyan.

> From ten cards that were exactly alike I selected one and showed it to the somnambulist[3], and suggested to her that she would not see it when she awoke, but that she should see and recognize all the others. When she awoke I gave her the ten cards; she took them all, except the one that we had shown her during the somnambulistic state - the one I had made invisible by suggestion. How, we may ask, is it possible for the subject to carry out so complicated a suggestion? How does it come about that he does not confuse the invisible card with the others? It must be that he recognized it. If he did not recognize it he would not refuse to see it. Whence this apparently paradoxical conclusion - that the subject must recognize the invisible object in order not to see it! (Binet, 1896 p. 301)

Binet (1896) goes on to cite other evidence to support his hypothesis of unconscious perception, including work performed along the same lines by William James (1896).

States of Consciousness and Theories of Consciousness

The varied modes of conscious and unconscious perception are significant for our current project because they provide examples of various states from which we interact with the so called external (physical) world. What we normally think of as our unitary waking state of consciousness is really a succession, or perhaps even a superimposition, of conscious and unconscious states through which we define the world and regulate our interactions with it (Ludwig, 1969). The examples from hypnotism are particularly striking because they lead us to question the objective quality of the external world. Binet's (1896) interpretation of his experiments as demonstrating unconscious perception is predicated on the fact that there were others in the room who perceived what the subject could not. The existence of the red square could be attested to by Binet and by the other non-hypnotized subjects. If no one had seen the red square, Binet's conclusions would have been quite different!

One question that arises from these considerations is the question of which state(s) we take as definitive of our relationship to the world. Our

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[3]The subject who had been hypnotized.

relationship to the world changes with each change in our consciousness, so we must choose one state as primary if we are to assign any fixed characteristics to the world. That is, we must learn to interpret the world based on what we agree is the most important state of consciousness for our interactions with that world.

It is clear that our culture has decided to take our so-called daytime consciousness as primary. Still, we are forced to ask, Which state of daytime consciousness? In the previous sections I have spoken of a "normal" daytime consciousness as if we knew what that was. I now put the word normal in quotation marks as an indication that the meaning of this word is ambiguous (see Tart, 1969 p. 1). Since we have no objective way of defining which of our many consciousnesses is "normal," we must accept as "normal" that consciousness which is tacitly accepted as "normal" by most of the people who we meet and interact with in the course of our daily lives. In our culture this is the consciousness through which we create, accept, and interact with the world that we take to be "there" in some physical sense. To say that we take our "normal" daytime consciousness as determinative of the physical world is just to say that most of the people in our culture accept the existence of the physical reality that is determined by this consciousness. It does not mean that the world is "really" the way we take it to be in this state of consciousness. Our state of consciousness and our taking of the world to be a certain way are in a mutually supportive/creative relationship. The world is the way we take it to be because we invest that world with reality by crediting a specific state of consciousness, which has that world as its content.

Any characteristic that is putatively put in the external world exists only as such relative to the state of consciousness in which we see this characteristic. When we change states of consciousness, we change our relationship to the world and, in doing so, we change what we take to be in the world. Changes in consciousness due to hypnosis (or various dissociative disorders such as multiple personality disorder) are striking examples of the effects of changes in consciousness on our creation and experience of an external world (Braude, 1991). In these states we do not experience the objects of the world in the same enduring way that we do when we are in our "normal" consciousness. Objects can disappear from our consciousness and reappear later (or perhaps not at all).

The process of selecting one of our multiple consciousnesses as determinative is inherently social. It involves the formation of, and communication among, a group of individuals who cooperate in selecting and defining a mode of consciousness. This community[4] then takes this mode of consciousness as definitive of what the world is like.

Science as Social Knowledge

Perhaps the most well studied example of social influences on knowledge is the study of the social creation of scientific knowledge. Latour and Woolgar (1979), Latour (1987) and Longino (1990) provide excellent analyzes of how scientific communities influence the practice of science. Their analyzes focus both on how values are incorporated into science and how criticism transforms individual into scientific (i.e., community) knowledge. According to these authors, new scientific knowledge is always produced and evaluated in a specific context, by specific people. For Longino (1990), this context is expressed through the background assumptions that infuse the discipline in which the scientist works. These background assumptions establish acceptable methodologies and express theoretical concerns which the researcher must accept. They may specify the types of experimental procedures to be used, such as requiring clinical research to follow a double-blind protocol, or they may specify theoretical positions to which research

[4]I use the word community in a very broad sense to mean a group of individuals who feel themselves united by common views or in search for a common goal. In this sense, a community can be as small as two people or as large as a culture. All that is needed to create a community is (1) some type of interpersonal communication, and (2) the willingness of one or both of the parties to modify their ideas or practices based on that communication. As communication increases, the chance for social interactions to effect theories and perceptions also increases but I do not see the amount of social interaction as being of primary importance. The willingness of an individual to modify his ideas is of equal or greater importance. In this I differ from Daston (1992) who restricts the ability of scientific communication to substantially influence scientific theories (i.e., to lead to socially constructed objectivity) to the period beginning with the middle decades of the last century when communication between scientist greatly increased.

must adhere. Examples of the latter type of assumptions are 'consciousness is an emergent phenomenon' or "all human disease is genetic in origin" (Berg quoted in Olson, 1989 p. 7). These assumptions provide the vehicle for the incorporation of values and ideology in science. They are part of the context of scientific discoveries.

Not only do scientific results[5] bear the stamp of their context, they also bear the stamp of the scientist(s) who made them. In the initial stages following publication, this stamp may be idiosyncratic. It may embody the scientist's subjective preferences for certain methods, theories, modes of presentation, or what she sees as the relevance of her data to social or spiritual concerns. As the results are assimilated into the body of science they are subjected to the scrutiny, support, and criticism of other members of the scientific community. This scrutiny is the process by which the community removes individual idiosyncratic elements from the discovery and converts the individual's results into scientific knowledge (Longino, 1990). The result is objective scientific knowledge: knowledge that is accepted by the community as being true of the world.

Fig. 1 The Janus face of science (after Latour, 1987). Science both creates Nature (young face) and sees its results as based on Nature

[5]In the following I distinguish between a scientific result and a discovery. A result is a published account of some item of scientific interest by a specific individual or laboratory. A discovery is a result that has been accepted by the larger scientific community as being true. The transformation of a result into a discovery is a social process.

(mature face).

The propensity of scientific communities to turn an individual's results into certain knowledge gives science a Janus face (Latour, 1987). One face is "scientific knowledge," the other is "science in the making." The face that is "scientific knowledge" sees science as based on enduring facts of Nature. Science, as expressed by this face, is about the world of Nature as it exists apart from any investigation of it (Figure 1). This is the mature face of science, the face that is often taught to students in introductory classes. The face that is "science in the making" creates what the mature face takes to be Nature through the social process of discovery of results and community scrutiny (Figure 1). This face creates Nature. Any of the qualities that the mature face of science takes as existing in Nature were put there by the youthful face of "science in the making." The following example will help make this clear.

Among other cases, Latour (1987) analyzes the purported discovery of the structure of Growth Hormone Releasing Hormone by Schally, Baba, Nair and Bennett (1971). In a partly fictional account based on Wade's (1981) description of Schally's work, Latour (1987) evaluates the social process by which scientists marshal support for their results. Whether the discovery is accepted or not depends not only on the original results (Schally, 1971), but on many social factors such as the status of the investigator, his institutional affiliation, his relationships with other scientists in the field, which of these scientists accept his results as valid, the status and institutional affiliation of his supporters and critics, etc. These and similar consideration show us that a seemingly simple discovery is, in fact, not simple at all. For Schally's result (a published amino acid sequence) to be regarded as a valid scientific discovery it must be accepted as such by a community of qualified scientists. Once his result is acknowledged by this community, it becomes useful to others. The result begins to fade from view and a discovery takes its place. At this stage, his result can then be accepted as worthy of further attention on the basis of the credentials of the community that endorses it. The result can now be used in other experiments. If these experiments are successful (as judged by the scientific community) the discovery becomes a fact of science whose existence is seen as dependent only on external Nature. The social process that transforms the result into a fact of Nature is ignored. This

process of science is not seen as playing a significant role in the discovery, which is viewed as inevitable given the facts of Nature.

This Janus view of science is quite different from the conventional view that sees only the mature face of science, not "science in the making." As we learn to see and credit the face that is "science in the making" we learn that it is not only scientific results, but also scientific communities that create science as a system of discoveries about Nature. In this sense we can say that the properties of Nature are created by community practices. Without a community of scientist to critique, support and utilize a result, the result would remain the province of a single scientist (or laboratory). It would not become a discovery that was accessible to all working scientists.

Although community criticism transforms individual results into discoveries and incorporates these discoveries into the canon of science, it does not remove all values from science. Rather, it brings the investigator's assumptions and idiosyncrasies in line with those of the community. In other words, it incorporates the discovery into the context of the larger scientific community as expressed through the background assumptions of that community (Longino, 1990). The new results are imbued with the values embedded in this larger community.

The transformation of a result and its incorporation into the mature face of science need not transform just the result, it can also change the community. New discoveries (now considered broadly to include new theories) always have the potential to transform the preexisting values and assumptions of the larger scientific community. This transformation may be subtle or radical depending on how the discovery is received and how it fits with other work currently occurring in the field. The fate of a new discovery also depends on the strength of the supporting evidence, the number of unresolved problems in the field, and, not least, on the standing of the scientists who support and instantiate the discovery.

Can we use this knowledge of social processes in science to understand what happens when we select one of our multiple consciousnesses as determinative of our relationship with the world?

Social Influences on Consciousness

In our "normal" waking consciousness the world appears to us as composed of preexisting objects and relationships. At some basic level, I see a tree and know that it is really there. I have an immediate and seemingly unmitigated understanding that the tree is not created by my consciousness but exists outside of me as an independent entity. This understanding is reinforced both by the predictability of events and by my ability to manipulate my environment. Events do not seem to happen at random. My days are patterned with repeated occurrences. Through years of experience I come to know myself as an active agent in a preexisting world.

Although the existence of a preexisting world often seems indisputable, we can begin to question the validity of this experience through the study of other cultures. Certain cultures experience the world in quite different ways. For instance, the Aranda people of Australia use the term *altjiranga mitjina* to refer to the time-outside-time that exists in dreams and which, to the Aranda, is also the time in which their ancestors live (Rheingold, 1988). To the Aranda there is no difference between the time of their ancestors and the time during which they themselves dream. The term *altjiranga mitjina,* and the culture that surrounds it, implies a very different relationship to the world than we experience based on our Western objectifying consciousness. To credit the concept of *altjiranga mitjina* with power and reality the Aranda must approach the world from a different consciousness than we do. Our normal daytime consciousness allows us to form theories about dreams and dreaming consciousness (e.g. Freud, 1899/1942) but we do not, as a rule, experience our ancestors as present among us in a kind of time-outside-time. We may even take persistent experiences of this sort as indicators of serious psychological problems. To the Aranda, however, *altjiranga mitjina* is real. It is part of what they call the preexisting world.

The view of knowledge that sees the nature of the preexisting world as dependent on our state of consciousness is uncommon in the sciences. Sir Arthur Eddington (1930) explains the more common view in the following manner.

> But consider how our supposed acquaintance with a lump of matter is attained. Some influence emanating from it plays on the extremity of a nerve, starting a series of physical and chemical changes which are propagated along the nerve to a brain cell; there a mystery happens, and an image or sensation arises in the mind which cannot purport to

> resemble the stimulus which excites it. Everything known about the material world must in one way or another have been inferred from these stimuli transmitted along the nerves. It is an astonishing feat of deciphering that we should have been able to infer an orderly scheme of natural knowledge from such indirect communication. But clearly there is one kind of knowledge which cannot pass through such channels, namely knowledge of the intrinsic nature of that which lies at the far end of the line of communication. . . The mind as a central receiving station reads the dots and dashes of the incoming nerve signals. . . But a broadcasting station is not like its call-signal; there is no commensurability in their natures. So too, the chairs and tables around us which broadcast to us incessantly those signals which affect our sight and touch cannot in their nature be like unto the signals or to the sensations which the signals awake at the end of their journey. (Eddington, 1930 pp. 34-36)

While Eddington (1930) recognizes that our images of the world are shaped by our senses, he accepts the existence of a preexisting world of objects apart from our experience of them. To see the problem with this view, we need only ask ourselves how Eddington knows that there is a world of chairs and tables that "broadcasts" to us. If, as he claims, his only evidence is our reception of these "broadcasts," how does he know that there is a world of objects standing behind these experiences? Either he is claiming access to privileged knowledge that allows him to know the world apart from the way it appears to his senses, or he has created that world by projecting his representations into the world. Since Eddington never explicitly claimed access to privileged knowledge I will only deal with the later case, the projection of sense experience into a pre-experiential world. In doing this, Eddington is making an assumption about the legitimate types of things that can be in the world. But this is not a mere intellectual assumption. It seems unlikely that Eddington holds the *theory* that there is a world of objects that "broadcast" to us. He more likely, like most of us, sees chairs and tables as really existing in the world. He creates these objects from his sense experiences. As he does this he selects a state of consciousness out of which it is possible to create objects. In other states of consciousness he could not take this creative step. For instance, dream consciousness does not lend itself to the creation of enduring objects. Dream objects appear and disappear from the dream world in a way that is not possible for objects in the world of our normal daytime consciousness. The objects and the state of consciousness that engender

them exist as components of a self-supporting system. Physical objects only have their characteristic externality because they take their genesis from a state of consciousness that creates externality.

Although this externality-creating consciousness is necessary for the creation of the world of our everyday experience, it is not sufficient for this task. Eddington creates the external world out of this consciousness but he does not do so alone. He does not think or act in a vacuum. He is part of a community of individuals who hold similar views and who modify their views based on interactions with the world, and among community members. These communities are similar to, though often less coherent than, scientific communities. The creation and shaping of consciousness that takes place in communities does so through social processes that reinforce certain parts of our experience at the expense of others. Those experiences that are reinforced are emphasized, while those that find little or no reinforcement are down played.

To see that community processes select and reinforce specific states of consciousness, and not just the content of consciousness, recall that all consciousness is inherently intentional (Husserl, 1913/1962). Consciousness is always consciousness of. Thus, as we change consciousness we change the "of-ness" of which we are conscious[6]. Dream consciousness is the state in which we are conscious of dreams. Daytime object consciousness is the state in which we are conscious of the objects of our everyday world. Consciousness, and the of-ness of which we are conscious, exist in a mutually supportive, interdependent relationship. Each is dependent on the other for the creation of the content of our experience.

As community processes shape the of-ness of our experience, they change our consciousness. A community that accepts the reality of the time-outside-time of *altjiranga mitjina* engenders a state of consciousness that allows the experience of *altjiranga mitjina*. *Altjiranga mitjina* can thus be seen both as an experience held by the members of a certain community and as the consciousness out of which this experience occurs. In the same way, a physical object is both an

[6]I avoid saying that we are conscious of "something" or of "objects" because these words imply that the of-ness of which we are conscious are things or objects having the type of externality that is created by only *one* kind of consciousness.

element or our experience and the consciousness out of which the object is created. Consciousness and the reality engendered by that consciousness exist in a mutually supportive system that is maintained by social processes. The relationship between these elements changes with each change in consciousness so that it becomes difficult to determine any fixed characteristics that exist in the world.

Another way of seeing the relationship between consciousness and its content comes with the recognition that no state of consciousness is self-determinative. A certain state does not arise in us as an inevitable consequence of being alive. At the grossest level, the ability to sustain any form of consciousness is dependent on receiving sufficient nutrition. This, in turn, is dependent on a stable social and political situation that allows the production and distribution of food. At a more subtle level, states of consciousness are elicited and trained through social institutions. College is as much about learning to think as it is about learning facts (Erickson and Strommer, 1991; Meyers, 1986). As any college teacher knows, learning to think is no easy matter. It demands a specific, focused, state of consciousness that can only be evoked through practice. The fact that we are familiar with the transitions that take place during college should not diminish their importance for us. All states of consciousness are substantially determined by social interactions: the culture we inhabit, the times we live in, the institutions we attend, the company we keep, etc. Barfield (1965) makes a similar point in his elegant book on appearance and reality: *Saving the Appearances*. He marshals evidence to show that the medieval world was not our world. The inhabitants of different historical periods took different kinds of experiences to be about the real world. In this sense, history is a record of changes in consciousness and the concomitant changes in the nature of the world.

Consciousness and Beings

The picture that has emerged in the preceding discussion is one of an interdependence between social groups, consciousness and the constructed reality that is taken for granted by a community. None of these components exist in isolation. They form a system in which the individual elements are linked into a larger whole (Figure 2). The existence of this whole makes it difficult to speak about the individual

elements in isolation. When we do so, we tend to emphasize a specific element at the expense of the others. To say that a specific state of consciousness engenders specific characteristics of reality emphasizes the creative power of consciousness and down plays the role of the community and the World[7], which cooperate in the process of interpersonal validation of the contents of experience. Interpersonal validations are built out of community interactions with the constructed reality that the community takes to be real. In trying to make one of the three parts of the system clear we inevitably downplay the role of the other two.

The following phrases are attempts to find an adequate way of expressing the relationships diagramed in Figure 2. The first three sentence pairs each describes one link in the system. The numbers are keyed to the links in Figure 2.

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[7]It is difficult to explain, in a short space, what I mean by the word "World." Barfield (1965) approaches my meaning with his concept of the unrepresented. For Barfield, the unrepresented is the ground of existence as described by contemporary physics. He is struck by the discrepancy between our experiences and this underlying ground of reality. Faced with this discrepancy he concludes that the multitude of perceptions that we call reality are really representations (or figurations, to use his term) of this underlying ground.

I want to go one step farther. To me, the theories of physics are also constructions of reality. We cannot rely on these theories for a direct description of the ground of the world (the World). The World is what reality is like before it is figured into perceptions by our sense apparatus and thinking. We become aware of its existence only through our experience of agreement/disagreement with other people. It is the basis for all agreements and disagreements. I am tempted to say that the World is that which underlies the of-ness that is the content of consciousness: the of-ness on which communities agree. However, this formulation tends to objectify the World, to give it thing-like qualities. The word "underlies" implies that there is some physical thing that lies under the characteristic "of-ness." The World cannot have thing-like characteristics because the quality of thingness is a community creation as much as any physical object. The World is no-thing with no-characteristics. At the same time it is expressed in and through all things and all characteristics. It is the no-thing expressed in all things. It is no-consciousness expressed in all consciousness.

1. Communities construct reality.
2. Reality shapes communities.
3. Reality contents[8] consciousness.
4. Consciousness creates reality.
5. Shared consciousness creates community.
6. Community engenders and strengthens consciousness.

Each of the following aphorisms takes one of the points of the circle as its starting point and moves around the circle of causality in one direction (Figure 2, dotted arrow). All of the aphorisms are equally true.

> Reality defines and gives meaning to a community that maintains consciousness in a way that allows that reality to manifest itself.
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> A community selects a state of consciousness that allows reality to manifest itself in a way that the community finds to be true.
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> Consciousness engenders a reality in a way that the community that sustains that consciousness finds to be true.

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[8]I am led to unusual word constructions because I want to avoid two related problems in talking about reality. The first concerns the use of the passive voice for the relation between consciousness, reality and community. The passive voice implies that a passive subject receives the action specified by the verb. Saying that reality is reflected in consciousness implies that consciousness is active and reality is passive. This is an artifact of our language that is not implied in the system diagrammed in Figure 2. The second problem occurs when we speak of reality as taking an active role in *creating* consciousness. Our colloquial understanding of reality as primary and consciousness as secondary makes it difficult to speak of reality as creative. Doing so encourages the reader to loose sight of the reality/community/consciousness system that creates/sustains reality and consciousness. I use the word "contents" in an attempt to get around these problems. By "contents" I mean an active process in which reality participates in and sustains a specific state of consciousness.

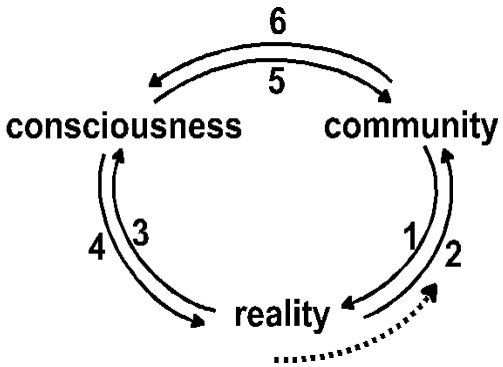

Fig. 2. *Reality/community/consciousness system.* The numbers and dashed arrow are keyed to the text.

I want to introduce a term for individual instances (instantiations) of this tripartite system of reality/community/consciousness. I call these specific instances, beings. Though constituted differently, they share many characteristics with other types of beings. They have their own qualities, tendencies, temporal extent, and can be resistant to change. Just as different species have different characteristics, different reality/community/consciousness beings have different characters. We feel these characters through our experiences as members of different communities. We experience the world differently when we are with different people.

There are two main, and interrelated, problems we face in trying to describe these beings: language and unfamiliarity. Despite some excellent work on systems theory (Wiener, 1961; Bertalanffy, 1969; Forrester, 1971) we still do not have a way of talking about and understanding systems as wholes that does full justice to their reality[9]. We can point to some general characteristics of systems, but have great difficulty in speaking about these characteristics when they are instantiated in a real system. For instance, according to systems theory

[9]The reality to which I refer here is a constructed reality just like any other. I am not suggesting that system theorists have access to privileged knowledge about the true nature of reality.

causality is contextual not linear (Bateson, 1967). For any effect there is more than one cause. General descriptions like these work fine as long as we stay at this level of description. Problems arise when we begin analyzing specific cases. When we look at a specific system we are tempted to revert to the language of causality, to select one of the elements as primary and to relate the others, as effects, to the actions of this cause. As we begin to speak of reality/community/ consciousness systems as beings, one natural tendency is to see the community of individuals as the being. But this does not do justice to the nature of the system. The group is no more the being than is the state of consciousness that is selected and maintained by the group, or the reality that is intended by this state. The being is the system of reality/community/consciousness that both transcends and is immanent in the elements that compose the system. Reality is constructed both by communities and by states of consciousness. None of these factors can be meaningfully isolated from the others. From a systems perspective, reality is constructed out of the context that is the system (Figure 2). The context is the cause of the reality[10].

One way of understanding these beings is to think of them as analogous to individual organisms. I want to stress that this is a crude analogy. We would be mistaken to draw too much from it. Still, it may be helpful to think about what it means to be a being/system in terms of organisms with which we are more familiar.

From a non-systems point of view organisms are composed of various parts that function harmoniously together to make the organism. This point of view sees the organism as extrinsically membered into a number of parts that compose the organism. I say extrinsically membered because, from this point of view, the parts do not have any inherent (intrinsic) connection with each other. The parts are externally connected through the fact that they *happen to belong* to an organism.

From a systems viewpoint the organism is a whole that is intrinsically membered into parts. The parts do not *happen to belong* to the organism. Rather they are parts *because they belong* to the organism. When we take this holistic view we see the parts as intrinsically connected to the organism as a whole. Part and whole stand

[10]Note that the (constructed) reality is part of its own context. This seems to be a general characteristic of complex adaptive systems (Gell-Mann, 1994). The inputs to a complex adaptive system include the states of the system itself.

in a different and more intimately connected relationship than we are normally accustomed to. From a holistic point of view it would be more correct to say part/whole than part and whole. The relationship is one where the part and the whole are so intimately connected that they take their meanings from each other (Bortoft, 1996). There is no whole without the parts that comprise it, but the parts are only parts because they are "of the whole." Abstract definitions of "part" and "whole" miss this relationship.

The reality/community/consciousness beings that I am describing have this part/whole character. The “parts” of the being are the (1) community members; (2) state of consciousness out of which the members of this community participate in the community; (3) constructed reality sustained by and sustaining (1) and (2). None of these “parts” exists in isolation. The do not *happen to belong* together. They are not extrinsic parts. They are intrinsic participants in the part/whole that is the being. They are parts *because they belong* to the being. If I have emphasized their part-ness it is because we, from our academically trained analytic consciousness, see parts more easily than we do wholes. I could, for a different audience, have begun with the whole (the being) and membered it into its parts.

Another way to understand that these beings are more than just theoretical constructs is to recall that it “feels like something” to be with a specific group of people. Our consciousness shifts as we come into contact with different groups of people. Snow (1959) refers to some of these experiences in his description of scientific and literary cultures in England after World War II. Although we all have these impressions, they are very difficult to describe. Instead of attempting inadequate descriptions, let me draw your attention to your own experience by asking you to reflect on questions like the following. What does it feel like to be at home with your family? How is this different from what you feel in your place of employment? What does it feel like to be at a conference in your discipline? How is this different from what you feel when you go to a football game? What does it feel like to have a friendly audience for a talk? How is this different from a hostile audience? We all experience these differences, but seldom pay much attention to them. I suggest that they are the result of subtle differences in the nature of the reality/community/consciousness beings that create the atmosphere in each of these places or situations.

The examples given above represent minor changes in reality/community/consciousness that occur within a culture. It is between cultures that more striking differences occur. Different cultures can be based on radically different reality/community/ consciousness beings/systems. It feels different to be in them. This is true even within Europe. It feels different to be in England than on the continent; different to be in France than Germany; different to be in the Italian speaking part of Switzerland than in the French speaking park. The differences are real and immediate. They illustrate that reality/community/consciousness beings/systems are not merely theoretical. As theory, they are systems. As experience, they are beings.

What is The Brain?

From the perspective introduced here the brain[11] is an extrinsic part of an external physical reality that is constructed by the activity of a reality/community/consciousness being. It is a consciousness/social construct of this being. We, the participants in this being, imbue the brain with a number of characteristics that we then take to be determinative of the consciousness through which we create external reality. As such, the brain cannot be accorded any more (or less) credence as an effective agent than can any other part of constructed reality. For those who are members of the community, the brain will always seem real, given. It will be indisputable that the brain has a role in consciousness. The exact role may be the subject of vigorous debate, but, within this being, the fact that the brain must be the cause (or correlate) of consciousness will be indisputable. As Chalmers (1996) notes (though in different terms), it is difficult to convince those who participate in this being that there is a Hard Problem to consciousness. The being that participates them does not see it.

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[11]By "brain" I mean that human anatomical object that is taken as to be a nexus of structures or processes that are (or that produce) consciousness.

Consciousness and Communities

What about consciousness? Is consciousness the cause of the brain? Do we create physical reality and thus the brain through consciousness. Is consciousness more primary that physical reality? Although these are natural questions, the form in which they are put unintentionally leads away from understanding the relationship between consciousness and reality suggested here. I see neither consciousness nor physical reality as primary. Rather they exist as intrinsic parts of a system with a community of people who credit the type of consciousness that is sustained by the physical reality that this consciousness creates. To say that consciousness creates physical reality is to see only one part of the system. It is equally true to say that physical reality contents consciousness. Looking from this direction it appears that physical reality is primary. It is active in the process of "contenting" consciousness.

Are the systems I am speaking of identical with concrete communities of human beings? Again the question misses the point. Communities are the vehicles for the expression of a given state of consciousness that is embodied in the individual human beings that comprise the community. These individuals comprise the community precisely because they embody this consciousness. In instantiating this state of consciousness the community becomes a vehicle for a specific reality that is the content of this consciousness. The whole system (reality/community/consciousness) is the being, not the community.

Conscious and the Theoretician

In closing, let us return to my original objection that theories of consciousness do not take the consciousness of the theoretician into account. I believe that the theory of reality/community/consciousness beings elaborated here answers this criticism. The state of consciousness out of which I wrote this paper was engendered through readings and discussions with other people who share similar ideas. While no one shared exactly my ideas, there were enough similarities to make discussion possible. My views were shaped by these readings and discussions. The more I think about, discuss, and write about these ideas, the more clear they become both to me and to those with whom I

interact. We begin to form a community that shares a specific state of consciousness with a specific content. The reality/community/ consciousness beings of which I write are this content. They are as real as any community/consciousness created reality. My state of consciousness is an intrinsic part of this being whose content is the existence of reality/community/consciousness beings.

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