

Defining Consciousness: Christian and Psychological Perspectives

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Psychological Paradigms

The psychologist is precariously fixed on the bridge that connects the "hard" natural sciences of biology, chemistry, and physics with the "soft" social sciences of sociology and anthropology. The mind/ body, free will/determinism and nature/nurture problems are significant issues that the psychologist investigates to connect the "spiritual" aspect of life with the empirical world. While psychology is a discipline that has undergone a number of changes in its brief history, developments in other fields have had a considerable influence on how people view psychological questions and issues. Consequently, many cognitive and physiological psychologists have found themselves engaged in research that necessitates an interdisciplinary approach.

Bolles has described the history of psychology as a story of scientific fads.¹ These fads have ranged from phrenology in the nineteenth century to current neural network models and brain imagery. The advances and discoveries made in cognitive science and neuroscience over the past thirty to forty years have helped us develop a better understanding of how complex and wonderful our mental life is. Cognitive science is best defined as an interdisciplinary approach geared toward studying the workings of the mind and developing an integrated model of mental processes. Similarly, neuroscience is defined as an interdisciplinary approach to studying the structure and function of the nervous system.

Progress made on psychological, technological, biochemical, and philosophical fronts has brought us closer to understanding the mind/brain/soul link than at any other time in human history. Despite these advances, it is painfully obvious that there is still a considerable task ahead in developing a complete theoretical and experimental understanding of the human mind. No longer the *Black Box* of the behaviorists, the *Gray, Neural Computer* is a more contemporary model describing the brain, the organ of the mind. Cognitive science and neuroscience have changed the way we conceptualize our mental life.

Consciousness as the Object of Psychology

Consciousness and immediate experience are quite possibly the first objects of investigation for psychology as a science. The scientific study of consciousness may find its roots in William James and his descriptions of the "stream of consciousness."² In the mid-1900s, consciousness was embedded in the Black Box of the mind and was avoided by behaviorists primarily interested in overt behavior and not the mind, unless it could be indexed by behavioral data.³ Cognitive psychologists re-energized the study of the mind in the late 1950s, and mental activity came back into the mainstream of experimental psychology. Researchers in this area have made substantial progress in understanding the architecture and processes of mental life.

Defining Consciousness

Many experimental psychologists (as well as philosophers and theologians) have had difficulty providing a clear, complete, and exhaustive operational definition for consciousness. Consciousness is a slippery term and many (more than we have time to review) have attempted to formulate a coherent description of what this term represents. The great American psychologist, William James, avoided explicitly defining consciousness. He believed that we are all familiar with consciousness through introspection; it is a self-evident phenomenon requiring no operational defining. It was this introspective technique which was used to excess by many early psychologists that, in part, led to a reactionary movement by the behaviorists. Later in his life, however, James would change his position arguing that consciousness was a nonentity and had no place as an object of empirical investigation.⁴ For others who have persisted in the scientific study of consciousness defining it has been wrought with complexity.

This consciousness that is myself of selves, that is everything, and yet nothing at all-what is it?⁵

It [consciousness] is not to be confused with reactivity. It is not involved in a host of perceptual phenomena. It is not involved in the performance of skills and often hinders their execution. It need not be involved in speaking, writing, listening or reading. It does not copy down experience, as most people think. Consciousness is not at all involved in signal learning and need not be involved in the learning of skills and solutions, which can go on without any consciousness whatever. It is not necessary for making simple judgments or in simple thinking. It is not the seat of reason and indeed some of the most difficult instances of creative reasoning go on without any attending consciousness. And it has no location except an imaginary one.⁶

B. F. Skinner recognized in his book, *Beyond Freedom and Dignity*, that behaviorists had been accused of neglecting the study of consciousness.

The role of the environment is particularly subtle when what is known is the knower himself. If there is no external world to initiate knowing, must we not then say that the knower himself acts first? This is, of course, the field of consciousness, or awareness, a field which a scientific analysis of behavior is often accused of ignoring. The charge is a serious one and should be taken seriously. Man is said to differ from the other animals

mainly because he is "aware of his own existence." He knows what he is doing; he knows he has a past and will have a future; he "reflects on his own nature"; he alone follows the classical injunction "Know thyself." Any analysis of human behavior which neglected these facts would be defective indeed.⁷

The problem arises in part from the indisputable fact of privacy: a small part of the universe is enclosed within the human skin. It would be foolish to deny the existence of that private world, but it is also foolish to assert that because it is private it is of a different nature from the world outside.⁸

One form that definitions of consciousness may take is in the description of the phenomenal, experiential state in which a person is. Consciousness is the subjective experiencing of a stimulus or mental state. This state has been referred to as qualia and has received a significant amount of attention from philosophers.⁹ Using an introspective technique, people experience a unique scent when a rose is placed under their nose. Flanagan agrees with this type of definitions and believes that consciousness is a term that encompasses the variety of mental- state types which we experience.¹⁰ When we experience the world, we experience its sounds, tastes, and pains. Consciousness is the domain under which our perceptions are actualized. This category emphasizes our interaction with the world and the subjective, phenomenological nature of our mental life.

A second class of definition refers to consciousness as an emergent architectural concept: a central executive, processor, or attention allocation.¹¹ With these definitions, consciousness is not an experience but a center where cognitive algorithms, heuristics, and higher-order processing take place. It is a location inside the Black Box that is responsible for the analysis of internal and external stimuli and output (i.e., behavioral) selection. Consciousness might be defined as short-term memory, working memory, a mental space where processing of information takes place, or a self-monitoring center. The emphasis is on developing a model (i.e., a flowchart, a blueprint) that spatially represents where the responsibilities of consciousness are carried out. This approach attempts to discern the constructs of mental life as well as its functions.

A third category of definitions defines consciousness as awareness. The ability to identify an object or to focus on specific aspects of our environment is the dominating characteristic of consciousness. Awareness is the process of locating and isolating environmental stimuli (or internal stimuli) so that it is processed for additional information. The *awareness* of my physical state (hunger) influences my behavior (going to the refrigerator). Awareness of our environment involves the separation of what is "me" from the environment, that which is "not me." We also can be aware of selective aspects of our internal environment (hunger pains). An awareness of both the "me" and the "not me" necessitates self- representation, other-representation, and an ability to compare the two. The ability to identify and highlight stimuli and to engage in advanced processing is what consciousness is. "Know thyself" and "know thy environment" form the basis of consciousness.¹²

Considerations for the Christian

Why should Christians be concerned with the study of consciousness? At least two reasons are clear. The importance of consciousness as the locus for decision making and establishing relationships is significant for Christians in psychology, cognitive science, and neuroscience because these two abilities are near the heart of the Christian experience. While Scripture may have little to say about the link between mind and brain, the nature of the "stuff" that it is made of, or the architecture of mental life, it does highlight our mental life as an integral part of our relationship with Christ.¹³

Another issue is the mind/brain link. How does the brain work as the organ of the mind? The mind/ body problem (or mind/brain problem) is one of the classic issues of the psychologist. Some Christian scholars have challenged the notion of Cartesian substance dualism.¹⁴ Jeeves perceives the recent advances of cognitive science, which tighten the link between mind and brain, as the evidence that may lead us away from an unnecessary Cartesian dualism. He contrasts the view of the immortal, "spirit-stuff" soul as incompatible with a Hebrew, biblical image of our personhood.¹⁵ The physical and spiritual are not separate, but interconnected under God's fully sustaining power. Human beings are regarded as related to one another into the physical creation through the intimate presence of God and in reliance upon the constant state of his faithfulness and steadfast love. A conscious soul is not composed solely of spirit-stuff that is nonphysical. Consciousness can be seen as an instrument that emerges from the mind/brain link. Jeeves writes:

Mind is a label that we use to refer to the remarkable things they, human beings, and no doubt other creatures, can do in handling the vast amounts of information bombarded them all the time, reflecting on the information, and then going beyond it in anticipating and planning. In a sense, consciousness is an instrument of mind.¹⁶

The principles of free will and moral autonomy are important to the Christian world view. Without free will, "no praise, no blame" becomes the moral code. If we have no free will, then we have no moral accountability. If we are only biochemical machines who have no choice in what we do, say, or think, sin becomes a meaningless construct. Without Christ's death as payment for our sins and our informed, intentional decision to accept him into our heart, the Christian world view becomes hollow and irrelevant. This position, however, may be a result of my personal church tradition and might not be of help to those in other traditions who lean toward predestination. It is this theological aspect toward theory development that may generate discussion in the Christian community.

Cole has stated that the physical process of the mind/brain is the vehicle for expression of Christian experiences.¹⁷ Mental events have neural correlates which anchor consciousness to the "real world." This close relationship, Cole believes, is compatible with the afterlife. It is our consciousness and its role as the vehicle of moral relationships with God and others that is at the core of the Christian faith. Might the information-processing pattern of our brain be placed in our resurrected bodies? The impact that this

has on our understanding of heaven and the afterlife, once again, may be influenced by our church tradition.

Neuroscience and cognitive science have helped to give us a new understanding of how learning occurs at the molecular and cellular level, to identify brain regions important for conditioning, and to provide insight into the psychopathology of many mental disorders. Computer models and neural networks have provided a new way of understanding the workings of the mind as an information processing system. A number of researchers have investigated the link between mind and brain (Sperry, Gazzaniga, Eccles, Crick, Sachs, Chalmers), and Christians (Jeeves, Brown, Myers, Ashbrook) have contributed to this discussion.

Researching Consciousness

Flanagan has suggested that the way to develop a theory of consciousness is through what he calls the Natural Method, researching consciousness in a multi-disciplinary approach (i.e., anthropology, phenomenology).¹⁸ While most experimental psychologists and neuroscientists view phenomenology with suspicion, it is necessary to investigate the introspective qualities of consciousness such as qualia (the phenomenological, experienced properties of a mental state). The inclusion of evolutionary theory may add a principle of coherence to these many lines of analysis. Flanagan believes we will come to a consensus about consciousness by treating each discipline with equal respect.

The Function of Consciousness

One of the most interesting questions about consciousness is that of its function. Flanagan believes the only way to address this question of function is by developing evolutionary and general psychological theories.¹⁹ An evolutionary analysis of function is forced to address the ability of consciousness to enhance survival and procreation.²⁰ We are better equipped to deal with our environment when we are able to process information, plan ahead, and respond to environmental events. The inclusion of qualia allows for emotional responses and a subjective experience of the world in a manner that is fundamentally different from a stimulus-response experience that is emotionally void. This emotional aspect further aids survival.

Flanagan makes no mention of possible religious functions of consciousness. There is no inclusion of theological analyses. Brand offers an alternate function of consciousness, which is to be aware of self and the Creator.²¹ I would argue that the purpose of consciousness is not primarily for survival, but is for entering into relationships. The Relationship Principle may be defined as the underlying function of consciousness that processes information for the purpose of interaction. Our consciousness (1) enhances survival, (2) acts as the binding loci of qualia, and (3) acts as the decision maker/information processor through which we (4) establish and enter into relationships. Items 2-4 display the Relationship Principle in that the ability to process information, experience our environment(s), make moral choices, and enter into an experiential exchange with that which is "not me" are expressions of our humanness. These abilities are at the core of the Christian faith: a covenant with a life-giving, just, redeeming, and loving God who wishes to be known.

A Christian Perspective

Cognitive science, neuroscience, and theology are interdependent. Together they deepen our understanding of the human condition and draw us to a clearer vision of how God's handiwork is displayed in some of his greatest gifts to us: our mental life and our ability to know him in a loving relationship. It would be improper for Christians to maintain a fragmented approach to studying these gifts. Being fully informed of the theological and epistemological positions that exist regarding human nature is important for the Christian. For example, those in Reformed traditions may have various viewpoints about the nature of free will. The tradition which psychologists adopt or in which they were raised can influence how they approach a cognitive process like decision making. There are, potentially, a myriad of ways in which these traditions might act as paradigms to dictate how theories of consciousness are developed. With this in mind, we must be continually educating ourselves with respect to our theological traditions, and this is no small task.

Consciousness is a topic that combines the simple essence of our self-awareness with the complexity of the neural system that underlies it. As Christians, I believe that our task is to approach consciousness with a respect for the recent discoveries made in cognitive science and neuroscience. We must be careful, however, of adopting definitions that might lead to a consciousness that leaves God out of the picture. We also need to examine our theological traditions and determine how they shape our theoretical paradigms. I believe that the Relationship Principle may be able to unify the study of consciousness by acting to root the function of consciousness in relational exchanges. Consciousness is not just survival and reproduction, but is the vehicle through which we enter into relationships with our environment, each other, and, most importantly, our Creator.

Notes

¹Robert C. Bolles, *The Story of Psychology: A Thematic History* (Pacific Grove, CA: Brooks/Cole Publishing Company, 1993).

²William James, *The Principles of Psychology* (New York: Holt, 1890).

³B. F. Skinner, "Can Psychology Be a Science of Mind?" *American Psychologist* (November 1990): 1206-10.

⁴Daniel Bjork, *William James: The Center of His Vision* (Washington, DC: American Psychological Association, 1997).

⁵J. Jaynes, *The Origin of Consciousness and the Breakdown of the Bicameral Mind* (Cheektowaga, ON: University of Toronto Press, 1978), 1.

⁶*Ibid.*, 46-7.

⁷B. F. Skinner, *Beyond Freedom and Dignity* (New York: Knopf, 1971), 190.

⁸*Ibid.*, 191.

⁹Daniel Dennett, *Consciousness Explained* (Boston, MA: Little, Brown and Company, 1991).

¹⁰Owen Flanagan, "Consciousness and the Natural Method," *Neuropsychologia* 33, no. 9 (1995): 1103-15.

¹¹P. Churchland and R. Porter, "Levels of Analysis," in *Perspectives on Cognitive Neuroscience*, ed. R. G. Lister and H. J. Weingartner (New York: Oxford University Press, 1991); Francis Crick and Christof Koch, "The Problem of Consciousness,"

Scientific American Mysteries of the Mind Special Issue vol. 7, no. 1 (1997): 18-26, 33; and F. Rohrlich, "Cognitive Emergence," *Philosophy of Science* 64 (1997): Proceedings S346-58.

¹²N. Georgieff and M. Jeannerod, "Beyond Consciousness of External Reality: A 'Who' System for Consciousness of Action and Self-Consciousness," *Consciousness and Cognition* 7 (1998): 465-77.

¹³T. W. Hunt, *The Mind of Christ* (Nashville, TN: Broadman & Holman Publishers, 1995).

¹⁴Malcom Jeeves, *Human Nature at the Millennium* (Grand Rapids, MI: Baker Books, 1997).

¹⁵Warren Brown, Nancey Murphy, and H. Newton Malony, eds., *Whatever Happened to the Soul?* (Minneapolis, MN: Fortress Press, 1998) and M. J. Boivin, "The Hebraic Model of the Person: Toward a Unified Psychological Science among Christian Helping Professionals," *Journal of Psychology and Theology* 19, no. 2 (1991): 157-65.

¹⁶Jeeves, *Human Nature at the Millennium*, 185.

¹⁷Dick Cole, "Against the Integration of Psychology and Christianity: A Bold Proposal for an Alternative Paradigm," *Journal of Psychology and Christianity* 17, no. 3 (1998): 210-9.

¹⁸Flanagan, "Consciousness and the Natural Method."

¹⁹Ibid.

²⁰D. T. Kenrick, E. K. Sadalla, and R. C. Keefe, "Evolutionary Cognitive Psychology," in *Handbook of Evolutionary Psychology*, ed. C. Crawford and D. L. Krebs (Mahwah, NJ: Lawrence Erlbaum Associates, 1998).

²¹Jay Brand, "Challenges for a Christian Psychology from Cognitive Science," *Journal of Psychology and Christianity* 16, no. 3 (1997): 233-46.