THE COGNITIVE ROLE OF BELIEF: IMPLICATION OF THE NEW MENTALISM*

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It's rather exceptional and specially pleasant to meet with psychologists who meet with philosophers who in turn meet with psychologists — and vice versa. In searching for a topic that might be a little different and of interest in both disciplines, I came up with this title on the role of belief, thinking that questions of 'What to believe' are something of ongoing common concern in all disciplines.

From the standpoint of cognitive processing, one cannot overrate the importance and causal control influence of the belief system as a shaper and determinant of human behavior, at both individual and social levels. What a person or a society **believes** determines in large part what it **values** and thereby its decisions, actions and social policies. Human belief has often, if not always, determined the course of history, and there is good reason to think that the future fate of our biosphere is closely tied in a crucial way to variables in the kinds of beliefs (and associated values) we humans elect to live and govern by.

The beliefs that count most in all this are not those concerned with material subsistence (Karl Marx to the contrary), but rather with the higher order religious, philosophic and ideologic beliefs of the kind people live and die for, and particularly beliefs that incorporate or imply a worldview or a life-goal framework which then ultimately determines the public judgment of how things ought to be in the world, the cultural sense of value, and conceptions of right and wrong and of social justice.

The trouble comes, of course, as daily headlines and history affirm, when these great guideline determinants of human behavior come into conflict and clash, either with each other or with reality. Contemporary belief systems around the world today remain at odds in numerous respects, of course, but the greatest, deepest rift or conflict is that between two major, mutually opposed, and profoundly different kinds of truth, upheld by science on the one hand and by fundamentalist religions on the other — about the nature and origins of man and the universe and the kinds of forces in control. On the one side we have various spiritual schemes of religion, offering a supreme plan, purpose, higher meaning, etc. On the other, in contrast, we have the value-free, spiritually devoid, physically driven cosmos of science, run by chance and quantum mechanics and apparently lacking any ultimate purpose, value or higher meaning.

So, when it comes to judgments of how things ought to be in the world, modern society operates with these two very different kinds of ultimate reference frames. The one lacks credibility in the light of modern science; the other lacks humanistic appeal or acceptance — and flies directly in the face of common everyday subjective experience.

The most common means of dealing with these contradictory belief systems is to accept both, but to keep the two strictly separate. In the laboratory we emphatically exclude spiritual explanations while on the Sabbath scientific views have to go elsewhere. Politically, legally, we support the separation of Church and State, at least in the West. In a recent booklet on 'Science and Creationism', the National Academy of Sciences starts off with the formal pronouncement that "Religion and science are separate and mutually exclusive realms of human thought whose presentation in the same context leads to misunderstanding of both scientific theory and religious belief."

This kind of thinking, of course, leaves something to be desired: If two systems of belief about the same thing — especially regarding the nature and the origins of man, life and the universe — stand in direct contradiction and are mutually exclusive, then logically something has to be very wrong!

The thesis I shall try to defend tonight says that there is another way to go. A new alternative kind of answer to this dilemma seems to be emerging today, arising out of recently changed concepts in science concerning consciousness and the causal relations and interactions of mind and matter. A different way of scientific thinking, a different scientific description of ourselves and the world is suggested according to which each of the past major frameworks for belief, both the spiritual and the material, have been misleading, wrong in some respects while correct in others.

The new outlook that emerges is a kind of intermediate, middle-way compromise. It combines formerly contradictory features taken from both sides of the old dichotomy, and unites these past paradoxical opposites into a single, consistent, unified worldview framework. On these new revisionist terms (essentially those of the 'new mentalist' paradigm in psychology), scientific belief and religious belief no longer need to be kept, as in the past, in logically "separate and mutually exclusive realms." They can be fused and harmonized.

It was back in the early to mid-1960's that a number of things came together in psychobiology to cause a shift away from behaviorism, with its strictly objective, physical explanations, over to a new **mentalist** (for want of a better term) position accepting the causal efficacy of subjective or introspective mental events in a supervening sense. Earlier arguments in neuroscience that had excluded any causal influence of consciousness and which seemingly had been closed and airtight, were discovered to have a flaw, a loophole or shortcoming, and to be outweighed by a new 'emergent interactionist' reasoning.

A new formula for mind-brain interaction was perceived and described initially as a compromise between materialism and dualism. John Eccles and others have interpreted it as dualism. Conversely, mind-brain identity theorists interpreted it to be 'physicalism.' The new position **looks** like dualism in that it recognizes the causal reality and primacy of mind and spirit over matter. At the same time it also looks like materialism in that it denies the existence of mind or spirit in any disembodied form, apart from matter. Since it can hardly be both dualist and physicalist at the same time, it has seemed preferable to think of it as a distinctly separate position.

Instead of excluding mind and spirit from science, as had been the dominant practice for more than half a century, the new outlook puts subjective, mental forces near the top of the brain's causal control hierarchy and gives him primacy in determining what a person is and does. These revisions allow one to retain belief in science and the scientific method and at the same time they reinforce traditional humanist values — and support also **mentalist** (rather than behaviorist) concepts of the conscious self, freedom of will and personhood.

Although it has previously been emphasized, it seems the point cannot be stressed too often that the old terms like 'mentalism', 'dualism', 'cognitivism', 'materialism', 'monism', etc. no longer have the same meaning with our new outlook that they traditionally held in the history of philosophy and psychology up to the 1960's. The old distinctions simply don't hold in the same way any longer. We either have to invent new terminology or accept that the old terms have revised meaning. I have opted for the latter in labelling the new outlook as a 'mentalist' position but, despite explanations, have not succeeded in avoiding puzzlement and confusions.

Modified concepts incorporating 'downward causation' give the higher cognitive forces in brain processing control over the lower forces of neurophysiology. Changed concepts of causation, emphasizing emergent downward control, extend beyond mind-brain science into **all** the sciences. The causal control power of higher over lower forces is presumed to apply throughout nature, substantially transforming the kind of reality in which science would have us believe. It's no longer a micro-determined universe run merely by the fundamental forces of physics. The higher mental, vital, social, political, religious and all such forces get their scientific due.

Cognitive psychology, humanistic psychology, clinical, abnormal and related psychologies and psychiatries, as well as the social and

other sciences that depend on introspective mental phenomena and subjective explanations gain a more prestigious scientific status in the new outlook. Cognitive states had formerly been conceived to be either in parallel with or identical to their neural correlates. Either way it was supposed that science could provide, in principle, a complete explanation of brain function and behavior strictly in terms of the neural correlates without reference to the introspective phenomena, and this was taken to be the more rigorous and more truly scientific way to go. Accordingly reliance on subjective mental explanations tended to be put down as something short of true science. In the new interactionist reasoning the cognitive properties are recognized to be different from, and more than, their collective neural correlates, to have their own dynamics and laws of interaction, and to exert downward emergent control over their physiological constituents. On these revised terms psychology, cognitive science and the social sciences represent distinct sciences in their own right at their own level with their own laws and principles that are not, even in theory, reducible to the laws of brain physiology — though advancements in brain physiology should greatly enhance understanding.

American psychology in the early 1970's began as a discipline to accept the contents of inner mental experience as being scientifically respectable (i.e. as causal explanatory constructs) — in a rather abrupt turnaround sometimes referred to as the 'consciousness' or 'mentalist' revolution. One reads in the psychological literature of the '70s of "the demise of stimulus-response behaviorism", "a burgeoning new mentalism", and — of a "deep conceptual conversion in psychology", "a true paradigm shift".

What all this means is that the turnabout in the scientific status and treatment of consciousness has become more than just a passing fad, obscure philosophy or even minority science. It has become the dominant paradigm of a large scientific discipline, the main scientific discipline devoted to mind and behavior. Therefore, it has become something that science in general can be said to support and to stand for.

Many tough-minded scientists are inclined to put down the importance of the highly theoretical and philosophical issues of the kind we raise here because rigorous proof is still lacking, as is perhaps even the possibility of ultimate validation. But this, of course, misses the point. Scientific belief in behaviorism, for example, and in the philosophy of materialism over the past century, as well as beliefs in various religious faiths, ideologies, etc. have had tremendous impact despite the lack of any final validation. The enormous importance of belief variables does not depend on the degree of their validity but rather, again, on the causal control power of the belief system, once it is adopted, as a shaper and determinant of human behavior and thereby of world events.

Accordingly, regardless of questions about ultimate validity, it becomes important and timely to raise the following question for discussion: **"What are the practical and theoretical consequences of the consciousness revolution?** In other words what difference does it make when science switches from the old non-causal (parallelist or identity) interpretations of consciousness to the new causal (mentalist or 'emergent interactionist') interpretation?

A number of these consequences have already been mentioned, but a few more might be added as possible discussion topics:

For example, the old **freewill versus determinism paradox** becomes resolved — in a way that allows for self-determination and moral responsibility.

Dualist philosophy becomes less plausible because the strongest evidence for dualism, subjective experience and the conscious human mind, are now better accounted for than previously by a monistic scheme.

The **'science-values relation'** is substantially revised. Science now becomes qualified to take on a new role in the prescription of values. On the new terms it becomes logically easier to reason **from facts to values** or from what is to what **ought** to be. Moore's "naturalistic fallacy" becomes itself fallacious.

And finally, **quantum mechanics** no longer replaces or subsumes classical Newtonian physics conceptually as a more comprehensive theory of all nature. Neither is wrong. Both are needed, but for different things.

The list of consequences of this change is the scientific concept and treatment of the conscious mind goes on and on but this should be sufficient to start the discussion. Thank you.

Critique of R. W. Sperry's essay, "The Cognitive Role of Belief: Implications of the New Mentalism"

Prof. Howard A. Slaatte

Dr. R. W. Sperry has written a short essay on a theme that deserves increased recognition in our time. It would make a good introduction to a psycho-philosophical book of the stated theme.

There is just one weakness in the essay. It is an introductory announcement rather than a demonstration. Though it is a sequel to his splendid work in psychobiology with its implicit theory of emergent consciousness, it remains too general or tentative.

The closest Dr. Sperry becomes to a specification of pronounced significance is the assertion that it now is "logically easier to reason **from facts to values** or from what is to what **ought** to be." This climactic announcement is provocative, but it stands alone as an assertion that is not defended or enlarged upon. It may be contended hopefully that his assertion is the case, but the question remains: How so? How does one move from empirical facts to values? What demonstratively makes Moore's idea of a "naturalistic fallacy" a fallacy? One might wish to agree with Dr. Sperry, but on what basis?

It appears that Dr. Sperry in his previous writings has given us good grounds for possible accepting or, better, re-interpreting the empirical, instrumental ethics of John Dewey. But Sperry himself has not demonstrated where lies the link between his psycho-biology and Dewey's ethical endeavors. Perhaps this is work for a philosopher, but to do justice to Sperry's intentions, it appears, one would need to better understand just how he relates facts and values — even in the context of his interrelationship of the biological and conscious elements in psychology. For one thing, and perhaps most basic, one would need to understand how Sperry relates **thoughts** "in the brain" to the brain processes per se. The most problematic factor would be the distinction between thought and process, not for the sake of reviving the old dualism, obstensibily vanquished by Sperry, but for the sake of preventing the confusion of fact and value.

As one interested philosophically in this important matter I, for one, need more scientific light to be shed on this possible bridgehead. I must ask Dr. Sperry to divulge more of his perspective on **how** we can move from fact to values. Even should I see some discontinuity between them I would like to see more continuity on Sperry's terms, not mine. Why? Because he is seeking to resolve a philosophical problem on a scientific basis. I applaud his interest in this but must demand that he divulge more of the scientific **basis** for its resolution.

Response to Critique of Howard A. Slaate

Prof. Emer. Roger W. Sperry

The question raised by Dr. Slaatte regarding the logical derivation of values from facts, though not the central issue of the present essay, is basic, of course, to the whole subject of the relation of science to values. It is one which probably should have been explained more fully in defending my position, especially in view of the traditional teaching that facts and values belong in separate realms and that it is not possible to arrive at value priorities from scientific facts.

My rejection of this traditional claim comes mainly from perspectives in brain processing. I have assumed throughout that human values and one's sense of what **ought** to be are firstly subjective aspects or properties of brain processing. Similarly I assume that empirical facts, insofar as they are perceived by the brain, are also subjective properties of brain processes. Facts, or their effects, that are not known or perceived do not, influence the value-belief system. According to our current view that subjective phenomena are causal in brain processing, both values and perceived facts are capable of interacting with each other and also with other cognitive phenomena. To this extent at least, both facts and values are in the same realm, interact with each other, and there is no problem in this regard in going from one to the other.

This, however, is not enough because within the subjective realm itself, some things follow logically and others do not. The contention that facts are important determinants of values and that values do follow from facts involves some further points. It must be recognized in this context that values are located closer to the