

THE CHALLENGE OF CONSCIOUSNESS RESEARCH

by

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ABSTRACT

The following article reports on ideas about how to study consciousness that emerged during the course of the January 1992 Athens Symposium on Science and Consciousness, one of the principal aims of the meeting being as far as possible to escape from constraints on thinking about consciousness that might be imposed by conventional modes of thought. The first half of the report discusses in general terms the question of opening up the mind to wider ways of thinking, and this is followed by a more detailed compendium of concepts and specific ways of proceeding.

Introduction

Despite the great practical importance of consciousness, science has as yet made little headway in understanding the phenomenon or even in deciding what it is. This article (based on a report that appeared in *Frontier Perspectives* 3(1), 15-19, 1992 (published by the Center for Frontier Sciences at Temple University)) attempts a synthesis of the variety of views that emerged at a symposium attended by its authors that had as its aim the exploration of some central issues concerning consciousness (the Athens Symposium on Science and Consciousness, hosted jointly by the Athenian Society for Science and Human Development and the Brahma Kumaris World Spiritual University, held in Athens in January 1992). Particular themes utilised as focal points for discussion at the meeting included the nature of reality and its relationship to consciousness, the adequacy of current scientific approaches to consciousness, the role of intuition and conditioning in scientific work, mind-brain interaction, the nature of human identity, and the possible need for a new scientific paradigm and/or an interdisciplinary science of consciousness. Disciplines represented among the participants included physics, biology, chemistry, neuroscience, psychology, philosophy, sociology, medicine, engineering, ecology, parapsychology, mathematics, ethology and religion. The meeting had as its format five working groups reporting to a plenary session, as well as plenary presentations by individual speakers.

The final sense of the meeting was that, given the difficulty of the tasks placed before it, considerable progress had been made in terms of clarifying the issues and in laying down a firm foundation for subsequent research. One point on which there was general agreement was that the difficulties that science seems to find when it attempts to address the phenomenon of consciousness may be a consequence of the constraints that a restricted view of scientific method imposes on any kind of investigations and analyses that may be carried out. Although there was a minority dissenting opinion to the effect that quantum mechanics, if interpreted in the right way, might be able to give an adequate account of consciousness, it was generally felt that consciousness was so subtle that it would inevitably evade the forms of description that conventional science provides. The results obtained by other approaches would therefore have to be taken into account before we could

hope to achieve a full understanding of consciousness.

Consciousness itself consists of experience and reflection on experience, which reflection amplifies an existing sense of being both agent and experiencer, and permits the individual to construct a picture of reality, as well as to develop concepts not only of the individual's own situation but also of the corresponding experiences of reality of others. From these come in turn feelings of meaning and value.

The kinds of designations given in the above paragraph contrast noticeably with those employed both in the neurosciences and in experimental psychology. The latter discipline refers to the category indicated in the paragraph above as 'folk psychology', and does not accord it the same status as it does data gained from a psychological experiment. It cannot, however, be denied that such descriptions have clear value, and are indeed irreplaceable, within their own domain; consider, for example, how feasible it would be to teach a person a difficult idea if we possessed no folk-psychological concepts concerning other people.

To disregard such descriptions purely on account of their not being readily accessible to the methods of science seems therefore to border on the perverse. In a search for a more open concept of knowledge in general, it was suggested at the symposium that an insight might be an appropriate correlate to a scientific fact. In explication of this concept, insights themselves come from experience and reflection upon experience, and given an appropriate system of terminology can be communicated to others. Moreover, as with science, insights can be put to the test of experience in order that their value can be ascertained.

There is one crucial difference, however, between the way that formal science (as exemplified by specialities such as quantum mechanics) works and the way progress occurs outside the scientific domain. Within science, if evidence is found against an hypothesis, there is a prevailing tendency to call for its abandonment. Outside science, an idea does not have to be abandoned if it is found to be wrong once; it is simply noted that the idea does not always work and that there are exceptions. The idea may be a valuable one nonetheless, a state of affairs that only the test of time can tell. Despite this loosening of standards, studies outside the domain of science may be carried out systematically and in a way that involves exposing them to the assessment of the general community concerned, just as in science. It was pointed out that clinical medicine exemplifies these points well, in that it is a field where it is possible to draw conclusions of great practical value from a collection of data that is ambiguous and poorly controlled, and in addition encompasses experiential reports by patients

The idea that anything said about the natural world from outside the sphere of science is less valuable than the results generated by science itself seems to be a very deep seated one in our scientific culture. Psychological and sociological causes of this state of affairs, such as the value systems imparted during the course of a scientific training, and fear of the consequences if orthodoxy were to be left behind, were discussed. It was generally felt that much might be gained by a more broad-minded attitude, integrating with science, to whatever extent may be possible, concepts that have already been developed in other disciplines, and developing also new syntheses both outside science and together with science. But to engage in such an endeavour in practice, as far as scientists and academics generally were concerned, might necessitate very considerable changes in attitude on the part of the participants, and the ability to put aside conventional thought patterns that have come into existence in support of the standard scientific method. For example, science tends to be immediately critical of new ideas and to demand, rather as in a court of law, clear formulation as well as definitive proof of the ideas concerned. An entirely different, more empathetic attitude is indicated if the aim is to understand what there may be of value in an insight that another person claims to have had. It is true that this alternative attitude is not totally absent from the scientific process, but when present it has to fight hard against the dominant adversarial posture. The ideal situation, but one hard to achieve in practice, is for participants in a discussion to be in a spirit of preferring to add to the ideas of others than to be critical of them and aim to destroy them.

After this latter strategy for interaction had been conceived, attempts were made to put it into practice at the meeting. A notable change in style of interaction followed as a result. It became clear that participants to a discussion could indeed, simply by changing their dominant style of interaction, move into a mode where ideas focussing on an individual topic could be accumulated without interruption, and synthesised into new insights. It may be instructive at this point to include

in illustration of this theme extracts from an imaginary Socratic discourse, intended to convey a feeling for the gradual change in the atmosphere of the meeting that transpired as it progressed. The discourse was written by one of the participants, David Lorimer.

“Well, my friends, what have we learned? I feel that a great metamorphosis has occurred! We cannot erase our differences, and any attempt to do so makes them more marked. But we have seen the emergence of a deeper collective intuition and intelligence from the silence that followed the pain of our comparing our languages. Language is a necessary tool of our relationships, but we can easily become imprisoned in its constraints. ... We have discovered a new way of being together: a deepened awareness of difference through entering into a relationship with each other for a while. ... We are faced with the challenge of developing these relationships, rather than attempting to evade them either by asserting our own point of view or by blurring the distinctions between us. No feelings of euphoria can exonerate us from this responsibility. ...”

One factor that influenced the shift in the mode of interaction referred to was discussion of the concept of complementarity, which may be rephrased in the form, ‘points of view that appear to be irreconcilable may in actuality be perfectly consistent, and even conjointly necessary in order to do justice to the phenomena’. In such cases argument over who is ‘right’ may well be unprofitable. To take examples from the history of science, an argument as to whether an electron is a particle or a wave would never have led in itself to a satisfactory outcome since the truth is more complicated than either. Again, a dispute as to whether nature follows equations of motion or principles of least action would be a fruitless one since the two forms of description are mathematically completely equivalent. The moral, as far as discussions go, is that while one’s own point of view may sometimes seem to be clearly right and the other person’s clearly wrong, there may be nevertheless something to be gained by trying to understand what underlies the point of view of the other person, and to try to assimilate it to one’s own.

One issue on which a certain amount of attention was focussed was that of the connection between the scientist, the science that he or she does, and the influence of the latter on society and on the environment. Scientific training tends to lead a scientist to see science as an activity integral to itself, and accordingly isolated from everything else. From this point of view moral questions may seem to be irrelevant and only scientific ones important. The sense of separation of the scientist and his or her actions from the wider world is reinforced by stating that others decide how scientific discoveries will be used and that the consequences of scientific discovery are in any case often quite unpredictable. From this standpoint of isolation the scientist can disclaim the relevance of moral issues to his work. It was felt that this attitude was misconceived. In reality science is not an isolated system, but a powerful force having profound influences on both society and the environment. In view of this fact, science in general and individual scientists in particular should concern themselves to a greater degree than at present with the potential consequences of scientific research to the individual, to society, and to the planet.

In the above, we hope to have given the reader a general indication of some of the major issues discussed at the symposium. Conventional science relies exclusively on sensory channels for its informational input, and therefore can tackle issues relating to consciousness only in a very indirect manner, if at all while the humanities, on the other hand, deal directly with conscious experience, and do concern themselves with its subtleties and its meanings. These two approaches cannot be properly integrated together if we try to preserve an absolute distinction between science and non-science. The discussions at the Athens symposium demonstrated the degree to which distinctions made such as these are conventional in nature, designed to suit particular purposes, rather than absolute. The concepts and working tools generated at the symposium, leading to a perspective on knowledge which sees it as a unified whole of which scientific knowledge is only a part (or a limiting case), provide an escape from what may be regarded as an intellectual trap.

A Compendium of Conclusions

In the following, we have gathered together some of the main ideas discussed in the group meetings and in the plenary sessions. We hope that this list will be useful both as a stimulation for those who have not been exposed to these ways of viewing the problem before, and as a source of reference.

The main points on which there was fairly widespread agreement are the following:

(1) The study of consciousness should be concerned not just with definitions of consciousness but with descriptions of its mode of operation. The phenomena of consciousness should be studied in the aspect of subjectively lived experience rather than exclusively in terms of objective data (as is most often the case with cognitive psychology). As a result, an extension is needed in the concept of what constitutes science, defined as knowledge or the quest for knowledge.

(2) The 'extended science' is envisioned as in principle a continuum of activity ranging from science as it is currently practised to the humanities and the arts, and possibly including insights that may be gained from spiritual or religious practices. It will explicitly include consciousness in its many dimensions, including creativity; the use of symbol, myth, and metaphor; the role of the feminine; the historical perspective; and cross-cultural aspects.

(3) There are many artificial dualities to be overcome by the extended science. These dualities or splits owe their origins both to contemporary science and to the dominant paradigm, and include those between ourselves and nature, mind and body, mind and matter, the feminine and the masculine, the observer and the observed, science and values, inductive vs. deductive logic, and philosophy and science. In particular, science cannot be divorced from philosophy, because one always brings some philosophy to bear in one's thinking.

(4) We need to move from the fragmentation that reductionism produces to principles of complementarity and integration, from 'either/or' to 'both/and' thinking. The conventional notion of causality as local and physical needs to be broadened to take account of networks of causation, non-local interconnectedness, and correlations. The world has suffered from the conventional fragmentary approach, its integrity violated by considering only the parts and thus losing sight of the whole. Again, it must be recognised that no single language or approach can grasp the richness or elusiveness of nature; thus the new science should be open to new and multiple approaches.

(5) While science has conventionally been regarded as an objective endeavour leading to the truth about the nature of reality, we need to shift our thinking towards regarding its insights as being context dependent, and to recognising that all approaches to reality are value-influenced. We need actively to address the limitations of scientific approaches, verification, and theories, and to find a place in our world view for personal knowledge gained through introspection. The importance of intuition as a contributing factor in the process by which knowledge advances needs to be fully acknowledged. Language itself can provide an effective means of exploring quasi-objectively what has previously been characterised as being purely subjective.

(6) The extended science will develop in its scope beyond the conventional framework to the qualitative attributes of being and feeling, and will stress the importance of quality as well as quantity. The range of scientific information will expand to include the anecdotal and the more tenuous aspects of nature. Ways of codification and utilisation of such 'soft' information need to be developed. There is the recognition and the acceptance that insights of the extended science occupy a domain that falls in between ignorance and precise knowledge.

(7) A radically different attitude needs to be cultivated in the new science. The old humility (humus = the earth; hence humility = close to the earth), awe, wonder, and delight in the cosmos which is the beginning of all science must be restored. These are critical to regaining a reverence for nature. We feel that the attitude that predominates in science at present is arrogance, which has fostered dogmatism and scientism. In doing science, we should let the phenomena speak for themselves, rather than forcibly imposing our hypotheses on the phenomena. The importance of the scientist's attitude towards his or her work, preconceptions, and deeper motivations must be stressed. Effects, however subtle, of the experimenter on the experiment are to be anticipated and must be examined; thus self-examination on the part of the experimenter must be included as part of the scientific process so as to make the processes of description more complete.

(8) There is a novel role for the scientific collective in the new science. A newly emergent group creativity, perhaps involving a 'group mind' that exhibits camaraderie and cooperativeness in regard to solving problems in addition to the creativity of the individual should be nurtured, recognising that the power of the harmonious group is complementary to traditional Western individualism.

(9) Any studies on consciousness must acknowledge the inherent wholeness and unity of the body/mind, and equally avoid losing sight of the total person. The holistic point of view, contrasting with the admittedly highly successful alternative of assuming a Cartesian split and operating under largely reductionistic principles, seems essential in order to study consciousness in its full subtlety, and to explore its deep interrelationship with the realm of the physical.

(10) The foundations of contemporary science, and its limitations, should be taught to and understood by all scientific practitioners. While the uniqueness of both individuals and groups presents difficulties for the formalising a science of consciousness, consciousness studies are to be regarded nonetheless as having equal status to the physical sciences.

(11) The new science, as science with both consciousness and conscience, will concern itself with the consequences of science to the individual, society, and the whole world: it is a science for the integrity of both people and planet that should be translatable into action. The potential value to life of the discipline as a whole should not be compromised by the pursuit of more limited goals. At a personal level, the new science should help people be able to comprehend themselves and their place in nature, facilitate the development of empathic processes which aid mutual understanding, and enhance the meaning of life for individuals and for society.

These points call for a considerable change in the ideology and methodology of contemporary science. They presume a significant shift in consciousness within both the community of scientists and society.

Fertile areas for future inquiry include the nature of reality and how best to understand it, the nature of consciousness and relationship between mind and brain. Some participants argued that consciousness emerged from brain processes, others that consciousness was intrinsically non-physical and interacted with the body. Human identity was defined by some in terms of physical and biological substrates interacting with our sociocultural background and conditioning; others preferred to see our intrinsic identity as metaphysical, even if physically based and conditioned. Some participants advocated an interdisciplinary science of consciousness extending beyond that of the existing cognitive sciences, while others favoured a different approach that would instead utilise the results of the sciences whilst remaining outside the constraints of science itself.

Acknowledgements

We are grateful to David Fontana and David Lorimer for making available to us their own written accounts of the symposium. In addition, William Braud, Deborah Delanoy, Nick Herbert, Robert Morris, Steven Rosen and Marilyn Schlitz have provided helpful comments on preliminary drafts of the report. The presentation of the ideas in this report to some extent reflects a point of view developed in discussions in a subgroup in which the authors of this report participated, the other members of this subgroup being Deborah Delanoy, David Fontana, Rolf Sattler, Roger Taylor, and Danah Zohar.