

**Committee IV**  
East-West Perspectives  
on Spirit and Science

DRAFT - 8/15/88  
For Conference Distribution Only

**THE DISTANCE BETWEEN THE LABORATORY AND MONASTERY**

by

**Padmasiri de Silva**  
Professor and Head  
Philosophy and Psychology Department  
Peradeniya University  
Peradeniya, SRI LANKA

The Seventeenth International Conference on the Unity of the Sciences  
Los Angeles, California      November 24-27, 1988

© 1988, International Conference on the Unity of the Sciences

C-4

The Distance Between the Laboratory and Monastery

(Some Reflections on the Role of Values and  
Emotions in Science)

PADMASIRI DE SILVA

There have been many attempts to compare the logic of scientific investigations with that of the religious quest. In fact, recent attempts have been invariably concerned with the idea that though the methodology of science and religion are different, they seem to converge on the same reality. It has been maintained that the very facts of science makes sense, only if we assume some sort of implicit unifying ground underlying this complex data.

Some of the interesting points of convergence which have emerged in this dialogue may be summarised: rejection of the subject-object duality in the context of knowledge, acceptance of the world and the mind as a great relational network, the limitations of language, grammar and certain patterns of logic, the integration of apparent polarities, conflicts and paradoxes to scientific thoughts and a new interdisciplinary spectrum where physics, neurology, biology and mathematics cross cut into each other's boundary.

However, in this great dialogue between science and religion, an important issue has been glossed over, this is the relationship between types of knowledge and forms of life. It is a central ingredient in the religious quest, that certain styles of living and forms of life are intrinsically related to the generation of certain types of knowledge and the realisation of certain insights have a tremendous impact on the orientation towards life.

Wittgenstein used the term "forms of life" to refer to the total context within which language works. It is a complex network of habits, attitudes, skills and outlook within which language is interlocked. This metaphor may be extended to the strong organic framework within which forms of life and language work in the case of religion.

Affective and conative facets of our life are deeply wedded into our cognitive orientations, and this applies to the debasing aspects of our knowledge and lives as well as the more refined, valuable and intensive insights. Though a scientist's personal agenda, his devotion, concentration, honesty etc. can count as important facets of his life and work, yet the practice of science has been embedded in the logical rift between the way of religion and science, which is hard to bridge.

Today, the distinction we make on the one hand between the realm of the academia with the university, the lecture room, the research colloquium, the laboratory, and on the other hand, the temple or the church, the monastic life, meditation and retreats etc offers a strong duality which did not exist in very ancient times when the rhythms and tenor of ones life and the search for knowledge and wisdom rested on a more holistic footing.

In this paper, we are specially concerned with the relevance of our values and emotions both as the background to the development of cognitive orientations as well as its consequences. In exploring this subject, we see a significant area for study which not merely

separates religion from science but can account for the one track limitation in the development of science and some of its social consequences. Perhaps, paradoxically it is an area which science can investigate, the importance of values and emotions in the growth and refinement of knowledge. It is in this context that this paper will be concerned with types of knowledge and forms of life.

The search for knowledge when it is deeply grasped is "expressed in the whole area of living".<sup>(1)</sup>

In a more specific way, this paper is concerned with four issues which seem to throw into relief some important differences between science and religion or to put it in the form of a more graphic metaphor, the way of the laboratory and the way of the monastery. First, we wish to make an analysis of the "purified view of intellect", secondly, the absence of the intentional mode of understanding in scientific investigations, thirdly certain qualitative shifts in the progress of certain types or levels of knowledge, not completely integrated by science and finally the modes of communication in scientific and religious discourse.

(1) In General, the scientific enterprise, which is often described as a concern with formal relationships between statements tend to keep out questions of values and emotions. Even the attack on positivism by such philosophers like Kuhn, Lakatos, Feyerabend and others have been made within the same framework of conceptions, they criticise. The epistemology and the metaphysics of science as such will try to keep questions of moral psychology out. If this viewpoint is to

be described as the "purified view of intellect"<sup>(2)</sup>, such a view attempts to neglect the role of character in the development of the scientific and theoretical intellect.

(2) The object of scientific understanding and the object of an "intentional mode of understanding" are different: "An intentional mode of understanding is one that fills the world with meanings implicit in our aims and emotions. Not only is it indispensable to us as rational agents, it may also be irreplaceable by any understanding derived from natural science".<sup>(3)</sup>

These two points, one referring to a kind of universe, ~~other a form~~ "of life" which the scientist does not enter, points towards a ~~third~~ area of importance regarding possible qualitative shifts in the progression towards knowledge.

(3) Western philosophers have made wide variety of distinctions to differentiate types of knowledge: knowledge by description and acquaintance, knowing that and knowing how, breadth knowledge and depth knowledge and so on. What is important in the religious quest in the context of this paper is the role of the moral agent who not merely develops breadth of understanding, or conventional morality and habits but through the development of a deeper moral sensitivity seeks a more personal significance in the moral idioms he inherits<sup>(4)</sup>. It is such a moral sensitivity which can be

integrated into what may be called the development of mindfulness. Development of such an experiential mode of understanding cuts across conventional concepts, grammar, semantics and logic. It is a completely fresh open entry into the reality of the process which goes to condition the nature of human life, the reality of change and transience, the state of disequilibrium and the lack of an essence in events as such. What is discerned is a vast relational network in which the notion of the subject and object dissolves.

While such a reality may be common to the way of science and the way of religion, experiential knowledge in the religious quest is firmly rooted in the moral life. Whether we take the Hindu-Buddhist tradition or the Chinese and the Japanese Zen tradition they can respond to the tensions found in the western philosophical tradition, to a great extent created by the recent discoveries of science, specially in the field of physics. This is because the "eye for paradox" found in these traditions facilitates the easy transition over apparent dualities, keeping up with these dualities (eg. subject-object, body-mind etc) at one level of communication and transcending them at the other level, using conventional dualities at the conceptual level and dissolving them at deeper experiential level. But this is not merely a philosophical or scientific enterprise, it is deeply embedded in the moral culture and the culture of the mind, a complete way of life. When we examine the logic of the religious quest as different from a scientific investigation, what we wish to emphasise is the strong link between the types of knowledge and forms of life.

We have mentioned these three points which very clearly focus attention on the world of values and emotions, as it appears to be a paradoxical pre-occupation among scientists who wish to find parallel points of convergence with the religious quest, that they place themselves high on the upper reaches of mysticism, leaving out the world of ethics, values and the concerns of moral psychology. The burden of this paper will be to throw into relief, this vacuum in value and emotional components in the progress of science and its quest for wisdom. We are not saying that all the ills that befall in the name of science and technology on modern society, will find a panacea, in the unfolding of the theoretical point emphasised in this paper. It merely focuses on a significant gap, perhaps a loical gap between science and religion, not deeply investigated by philosophers seeking points of convergence between science and religion,.

(4) Finally there appears to be an important difference in the kind of format used for presenting scientific findings and religious insights. Philosoph3rs have used both types of format. The scientific abstract, the professional paper are a highly structured product of the evolution of scientific and philosopbical thought, where as in religion and in some philosophy, dialogues, aphorisms, koans, fragments, diaries, novels, poetry, meditations and the like will be used. Apart from presenting and recording information, the second type of format is attempting to get the reader to "see things differently".. Metaphors, imagery, parables, stories or exercises to do aim at a kind of 'transformation' of the audience.

### Science and the Purified View of the Intellect

The purified view of the intellect upholds that "intellect, especially the scientific intellect, is or should be purified of desire, emotion, and action ". This view which has come down from Aristotle's Nichomachean Ethics has remained as the dominant view in the contemporary English-speaking philosophical world.<sup>(5)</sup> In general, though such perspectives remained as the paradigmatic conception of the scientific intellect in the west, today there is re-thinking on the subject, and more broadbased eastern conceptions are becoming more attractive.

In neglecting the role of character and the active nature of the intellect, there is a self-imposed limit on the styles of intellectual and scientific activity and the nature of the intellectual life. "People are intellectually honest, intellectually arrogant, intellectually scrupulous, possessed of intellectual care etc..."<sup>(6)</sup>

Religion as a way of life will give prime of place to those very factors of values and emotions which the purified view of intellect try to eliminate. Also ,in considering science merely as an articulated body of truths, we over look the conception of science as an activity, the conception of doing science . Intellectual activity is bound to desires and they have ends and goals. Unalienated and whole hearted participation will make science a way of life rather than merely a body of truths. The point has been well expressed in some contemporary philosophical studies: Intellectual activity done for certain goals is a great human good and may form a part of the good human life. A life of such intellectual activity in its fullness will be rooted in intellectual virtues, emotions, desires and action.

This is the conception of science as a way of life which can offer a parallel to the life of the religious quest. The purified intellect notion has even captured some of the academic discussions in the philosophy of religion but that is only a facet of our interest in religion and by its nature the religious quest calls for the exercise of a greater variety of human skills, desires, emotions, values and actions.

Also, in recent discussions of the concept of "creativity" within the dimensions of modern science, scientific activity and more specifically ways of "doing science", interesting references to the role of emotions and values have been made.<sup>(7)</sup> There are references to both negative emotions and positive emotions in relation to creativity in science. Erich Fromm cites the case of negative emotions which interfere with the grasping of reality, whether it be a thing or person. Some thing like experiencing the reality of a person is a concept which comes within the objects of "intentional mode of understanding". It is something central to the religious quest but it certainly does not come within the purview of the physical sciences and not even in the biological sciences. It is the social sciences like psychology and within philosophy, the area of moral psychology that is concerned with understanding people.

But whether we try to understand things or people Fromm says that negative emotions like greed and anger and a wrong cognitive pre-disposition makes us distort the object of understanding and in addition project our own bias. In fact, Fromm draws from the eastern tradition when he makes these comments and more specifically the roots of greed, hatred and delusion as discussed in the Buddhist texts. Fromm cites

number of conditions for the development of the creative attitude : the ability to be puzzled, following Poincare's statement that, "Scientific genius is the capacity to be surprised".<sup>(8)</sup> The ability to concentrate, which he says is a rare ability in the Western culture is crucial for creativity. Fromm says "We do, if possible, many things at the same time. We eat breakfast, listen to the radio, and read the newspaper, and perhaps at the same time carry on a conversation with our wife and children. We do five things at the same time, and we do nothing".<sup>(9)</sup> He also cites the importance of the correct sense of 'Identity' for doing science, the ability to accept conflict and polarity (rather than avoid them) and the "willingness to be born every day". As Ravi Ravindra mentions, in Einstein we get the perspective on science as a way of freeing oneself from one's egocentricity. "A noteworthy contemporary example is that of Einstein. For him, certainly an engagement with science was a matter of spiritual vocation, a response to an inner call, a way of freeing oneself from one's egocentricity".<sup>(10)</sup>

Dealing with the positive emotions and its integration into styles of creativity, Rollo May has observed that in-keeping with work done with Rorschach protocols, that "people can observe more accurately precisely when they are emotionally involved".<sup>(11)</sup> The idea is that a person sees more acutely, sharply and accurately, when his positive emotions are engaged.

Thus if we make a distinction in using the term "science", between science as body of formulated truths, and styles of doing sciences and science as a way of life, these discussions of creativity are relevant to the notion of doing science. These discussions point towards the limitations of the concept of science upheld by the purified view of the intellect.

### Science and the Intentional Mode of Understanding

In the case of the limitations of the purified view of intellect, scientists have made some accommodation by making a distinction between the activity of science and science as a body of truths. But in the case of the intentional mode of understanding, natural science has not and perhaps logically cannot enter the world of meanings and values. Though within the social sciences, there is a current controversy as to whether social understanding deals with social meanings than casual regularities,<sup>(12)</sup> in the case of the natural science, the gap is hard to bridge.

If the religious quest firmly grounded in ethical values and the ethical way of life, which in turn is intrinsically related to questions of meaning, there appears to be a logical gap between the universe as the object of human intentionality and the universe as the object of scientific understanding (the paradigm grounded in the natural sciences). There are methodological advantages in the interaction between the natural sciences and the social sciences, but at

some point logical differences emerge. It is the same with the study of religion. It has been a well known respected methodology to summon scientific method as guidelines for understanding religion. The problem is that the concept science in this context may be loosely used, referring to notions like objectivity, impartiality, belief in casual regularities etc. But it appears that there is an important difference between summoning natural science paradigms and a social science framework. No religion is complete unless it has a study of the logic of human behaviour, its regularities, the rules it follows and the kinds of meanings enshrined in living (a form of life). Natural science cannot completely touch the full human being. Biological, physiological, neural, physical and chemical aspects of life do not cover the whole human being. The social, psychological and the moral aspect are central to the religious quest. Any attempt to generate a dialogue between science and religion has to face this central issue.

#### Science and Dimensions of Knowledge

In the case of the sciences, it is possible to speak of dimensions of knowledge, in a somewhat 'abstract' manner. For instance we see some important differences between natural science contexts and social science contexts, and within social sciences, we can make some distinctions of the logically diverse types of knowledge in history, economics and sociology, or we can look at psychology and distinguish its natural science components and social science components. But in the case of religion, it is little difficult to talk of dimensions of knowledge in the abstract,

as there are different religious traditions. Attempts have been made to find different logical strands over the diverse religious traditions, yet one ought to be aware, in certain contexts, of specific religious traditions. Keeping this note of caution in mind, we introduce a scheme of the different dimensions of knowledge, to talk about types of knowledge across the sciences and religions.

First there is theoretical knowledge which is dependent on using reason to explain an event in terms of a theory or a hypothesis: secondly we can speak of empirical knowledge which is considered as a kind of objective knowledge gained through sense experience, experiment etc; thirdly there is existential knowledge which is a realisation through a direct personal encounter with real situations, specially a concept like human suffering: lastly, we can refer to a dimension of experiential knowledge, which may not be found in the western scientific tradition but find its paradigm in yoga and meditation. While the concept of theoretical knowledge is well accepted in the rationalist tradition of philosophy, and empirical knowledge in the empiricist tradition, the existential kind of knowledge has been introduced by existential and phenomenological traditions. But experiential knowledge in the true sense is not integrated to the western scientific tradition and we can raise the question, is there a line of separation between science and religion according to our focus on experiential knowledge. If you take the Hindu-Buddhist tradition in religion all four dimensions of knowledge can be accommodated and integrated within this tradition. In the generation of this experiential

knowledge, a crucial role is played by a certain life style and form of living, where the refinement of human values and emotions takes place along with a refinement in the levels of cognitive awareness.

A conference of this sort where scholars in philosophy, religion and the sciences participate can make an important contribution by emphasising the possibility of the existence of different conceptual frames of locating man's concern with the nature ~~with the nature~~ of the universe and human life. One's own intellectual framework is limited by the semantic, logical and conceptual tools available within that system. When one comes into contact with another and alternative system, the momentum of the dualities, dichotomies and dilemmas that is disturbing loses its edge and gets converted into merely a contrasting way of looking at things. In this we find new bases for the mediation of conflicting theories and a new canvas for locating conflicts. It is perhaps due to such cross-cultural and even cross-disciplinary meetings in the past, that scientists in the west have developed an interest in eastern philosophies and religions.

Though such conceptual adjustments may be made, the conceptual mode is not a substitute for the experiential mode. The religious quest emphasises that certain types of knowledge are strongly rooted in forms of life, that the affective and the conative aspects are related to one's cognitive orientation. This is one of the general points made out in

this paper. Secondly, the question is raised whether there are special barriers between the subject matter of religion and sciences, whether the object of the "intentional mode", of meanings, aims and emotions can be understood in terms of the natural science paradigms. An awareness of these two issues can always act as a useful reminder of possible barriers, when working out an interesting dialogue between science and religion.

#### Modes of Communication in Philosophy, Science and Religion

We have examined the distinction between science as a body of formal truths and science as an activity, and in doing this emphasised the place of values and emotions in the process of scientific exploration, discovery and creativity. Secondly, we have mentioned the inability to integrate what may be called the objects of the "intentional mode of understanding" into the scientific universe dominated by a natural science paradigm. Thirdly, we have found some differences between science and religion pertaining to certain levels and types of knowledge. Apart from these three concerns, the process of discovery, the nature of the scientific universe and the objects of scientific understanding and thirdly the development in the progression in knowledge, an interesting subject, some what neglected in studies of this sort is the technique and the format of communication.

An interesting and useful way to explore the subject is to look at philosophy which has been attracted by both the ideal format in scientific communications as well as in religious discourse.

As Arthur Danto has pointed out philosophy is often a kind of cross bred of science and art,<sup>(13)</sup> that you can discern two types of format used in philosophical communication. The development of philosophy as a formal academic professional concern has emphasised its sense of community with science with an emphasis on clarity, brevity and competence. In this context the canonical literary format has been the professional paper. Here philosophers like scientists are building up the edifice of knowledge through a very restricted readership and as a collaborative enterprise.

But there is also another tradition in philosophy concerned not merely with the imparting of information but as Danto says with the transformation of the audience,<sup>(14)</sup> In ancient times philosophers were not very much distinguished from sages, saints, and mystics and in certain traditions there were philosophers who were wanderers, ascetics, poets etc. Within such a tradition, there were certain excesses, but there were the finer refined blends of the philosopher with the sage, saint, the poet and the artist. The second tradition often used techniques and a format more closer to literature than science and this dimension found in this second and more ancient strand of philosophical thinking can often be shared with the religious traditions. The use of the narrative form than the argumentative form for communication, dialogues, fragments, aphorisms, paradoxes, commentaries, poetry, parables, stories etc.

Thus techniques of communication in the Upaniṣads, the Bible, Koran and the Buddhist scriptures do often betray a tendency to use the literary format. If for instance, one reads the early Buddhist scriptures it will betray techniques of communication belong to both types of the philosophical traditions cited above.

The difference lies not merely in these formats and techniques as methods of communication but as methods which try to enter the mind of the list<sup>e</sup>ner, as well as the reader with the aim of getting them to see things differently, to use a metaphor, a certain kind of "depth" than merely the "breath" of information.

It is true that the literary format has entered the arena of scientific writing through science fiction, but that is more in a speculative turn of mind to play with ideas, articulate imaginary possibilities, for popularisation etc.

The kind communication used in a literary format is discussed by Theodore Roszak in his work, Where the Wasteland Ends.<sup>(15)</sup> He refers to Tolstoy's work, The Death of Ivan Ilyich, where the dying Ilyich sees a difference between, what he learnt in his logic books, "All Men are Mortal", and when it strikes him with the resonance of a personal crisis.<sup>(16)</sup>

Roszak says we are loosing our ability to go beyond verbal surfaces and get at the root meaning of words. He makes a distinction between knowing and "knowing".: "We are in the position of the Zen

master who began as a novice knowing that mountains are only mountains, rivers only rivers, and finished as a sage knowing that mountains are only mountains, rivers only rivers...ah, but finished knowing it wisely. How to talk about such things?"<sup>(17)</sup> Roszak regards the diminishing awareness of such symbolic resonance as a crisis in language.

The type of linguistic tradition (which in some traditions were orally transmitted in the past) which preserves the **handing** over of religious ideas have certain logical peculiarities which may be compared with the formal language used in scientific discourse.

-----

References

1. David Pole, "Breadth and Depth of Understanding", Philosophy, p.119, 1970.
2. Michael Stocker, "Intellectual Desire, Emotion and Action", in Ameli Rorty ed. Explaining Emotions, (Berkley, 1980)
3. Roger Scruton, "Emotion, Practical Knowledge", in Ameli Rorty ed. Explaining Emotions, (Berkley, 1980) p.533.
4. John Kekes, "Moral Sensitivity", Philosophy, v.59, 1984.
5. Michael Stocker,.....
6. Ibid.....p.324.
7. Ed.Harold H. Anderson, Creativity and its Cultivation, (Harper & Row,1959).
8. Ibid. pp.44-54.
9. Ibid.
10. Ravi Ravindra, "Science and the Mystery of Silence", The American Theosophist, Nov. 1982, Vol.70, p.354.
11. Ed. Harold Anderson.....pp. 55-68.
12. Alan Ryan, The Philosophy of the Social Sciences, Macmillan (London, 1970).
13. Arthur Danto, "Philosophy as/and/of literature", Presidential Address, American Philosophical Society Proceedings, September, 1984.
14. Ibid.
15. Theodore Roszak, Where the Wasteland Ends, (Anchor Books, New York, 1973).
16. Ibid. pp.349-50.
17. Ibid. p.350.