

METAPHORIC PROCESS: THE CREATION OF SCIENTIFIC AND RELIGIOUS UNDERSTANDING. Mary Gerhart and Allan Russell. Texas Christian University Press. Fort Worth. 1984. Pp. 192. No price indicated. Pb. By Jitse van der Meer

Models relating faith and science always reveal prior beliefs about that relation. In *Metaphoric Process*, the authors' prior belief is that knowledge is a purely human creation. Hence, it is in the way knowledge grows in the knower, that they explore the relation between faith and science. Knowledge is clustered in fields made up of related concepts that provide each others' meaning. Normal growth requires explaining the unknown by analogy to the known. When there is no analogy between two concepts from different fields of meaning it may be forced, the authors suggest, by creating a metaphor. The result is a dramatic growth of knowledge, such as Einstein achieved when he relativized the concepts of absolute time, space and mass.

If existing fields of meaning are required for knowledge to grow, how do new fields of meaning arise? For instance, the existence of the psychological and physical fields of meaning is presupposed in the concept of the balance of psychic forces which is a psychological metaphor of physical force and balance. The authors' answer lies in the human ability to be aware of the unknown, and to transcend this awareness by naming the unknown. Despite this, the authors also claim that new meaning does not necessarily arise by creating new words. However, the "charms" of particle physics testify to the opposite.

The authors see self-transcendence in science and in theology as a religious experience, and as the major characteristic of their relation. This does not help those who want to relate their beliefs also to what they know, not just to how they come to know. Moreover, if knowledge, religious or scientific, grows by merely changing the meaning of existing concepts, how does one know that the change is a loss or gain? Orthodox Christians cannot accept that religious knowledge is constituted by the human quest for the unknown, because they have a criterion for the acceptability of metaphors. This is, self-knowledge is constituted by a self-revealing God. If man naturally flees God, how can he come to know Him or himself by self-transcendence? Because the authors have no ontological criterion for the acceptability of metaphors (i.e., for truth), they have rendered themselves unable to identify a change of meaning as a loss or a gain, in religion as well as in science. This is despite their references to ontology and to the validation and verification of theories, which remain rooted in the knower.

By introducing the concept of the field of meaning, the authors do try to avoid the loss of meaning that results from the hypostatization of concepts. However, if the discovery of new meaning is a religious experience, and is not controlled by criteria for acceptability of the metaphors involved, how can they avoid idolizing newly discovered meaning? This problem is evident in the authors' hypostatization of change as the sole criterion for acceptability of metaphor. It is this hypostatization that renders them incapable of identifying a change of meaning as a loss or gain.

The lack of criteria surfaces also when the authors fail to explain their preference for changing the meaning of religious concepts when forcing an analogy with non-religious fields of meaning. Is this because they have the unwarranted belief that self-transcendence is more frequent in religion than in science? But then religious knowledge should be more mature than scientific knowledge. However, the authors' dialectical approach as well as their model of ascending levels of knowledge suggest that religious knowledge is the level last achieved and, therefore, least mature. They also ignore the possibility of using religious concepts to establish the meaning of concepts in non-religious fields via an analogy of faith or being.

Reading this book is hindered at times by the fact that the authors tend to postpone explaining the need for a section until its end. The organization is, therefore, somewhat choppy. However, the reward is a fascinating account of intellectual discovery via forced analogies which provides a new epistemological interpretation of the concept of metaphor. Subsequent scholarship will be required to decide on the universality of the metaphoric process. The book should be of interest to philosophers of science, theologians and those interested in the relation between faith and science.