

COMMENTARY ON THEOLOGICAL RESOURCES FROM THE BIOLOGICAL SCIENCES

by *Alfred E. Emerson*

It seems to me that one of the experiences that we all had in listening to Wald illustrates one aspect in which religion and science have something in common. I think everyone felt a sense of wonder concerning the fascinating panorama of existence in time and space that he allowed us to glimpse and the awesome quality of the story that he told. His words have been referred to here as "inspiring," as "poetic," as "beautiful"—terms that are seldom applied to scientific discourse. I would go further to say that you have heard a sermon. Awesome wonder of existence is the motivation of the scientist and the motivation of the religionist alike. We derive this inspiration and this feeling from knowledge, it is true, but we also have a deep emotional response to it.

I would like to pose a question to the religionists: What is the difference between the inspiration of scientific discovery and what might be called the religious experience? I, myself, think it possible that these responses have some similarity and that, in this respect, scientist and religionist share a profound awareness.

There is another aspect of the problem that I think should be mentioned. I am reminded of a cartoon that I saw many years ago in the *New Yorker* that portrayed two scientists watching a beautiful blonde technician passing in front of them. One said to other, "You know, I don't think it is so much the atoms and molecules that are important, but it is the way in which they are put together." This is a humorous illustration of different levels of organization and the fact that science transcends reductionism by putting things together and noting new emergent properties, qualities, and relations of the new associations.

Emergent novelty also answers very important questions that the religionist often puts to the scientist: What is the way in which new things are created? What is the process of creation? How does life come from the non-living, and how does mind evolve from pre-mental life? These are scientific questions because we have discovered new emergent relationships from new associations, and these can be measured and compared. The hierarchy of organization that has been mentioned

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and discussed here very briefly illustrates a process by which simpler units or entities become parts of larger whole systems, and these larger wholes have new characteristics emerging from the synthesis of the new system. New, complex, synthetic systems become part of and integrated into still larger whole units, but they are always composed of units of lower-level organizations.

True, the molecule is a unit, but it is put together into a larger whole—the organism. The individual organism is a unit assembled and ordered with other units into a still larger whole we call “society.” The society exhibits feedback influences from effects to causes in the physical and living universe which it partially controls and guides. Thus we become intellectually aware of and emotionally responsive to an ever increasing magnificence of larger and more complicated organized systems. From such perspectives, the scientist, the religionist, the humanist, and the artist derive their motivation. They become increasingly aware of progressive change in time to which they may make their individual contributions.

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by Bernard M. Loomer

I looked at the topic of the conference, and I read that it was something to the effect of the theological resources to be derived from the sciences (in this case the biological sciences). I took further assumption that the conference in turn could assume that biology could speak to theology and theology to the biological sciences, although in this particular conference the focus was upon theology from the point of view of these several sciences.

As I listened to Wald, I got the impression that he was answering the conference topic by saying that biology can furnish theology for theology. If that is his answer to the question, I would have to say I regard it as an inadequate answer. That is, I do not regard biology as being able

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