

Now and then

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About thirty years ago Walter Rosenblith and members of his Publications Committee visited me in my laboratory at the Rockefeller University. Walter proposed that I become the first Editor of the forthcoming *Biophysical Journal*. I suspect that this unique opportunity was presented to me as part of a deal he had made with Detlev Bronk, President of Rockefeller University, while persuading Det to have the Rockefeller Press publish this new journal.

Considerable procedural organization needed development as the first volume was assembled. Fortunately my wife, Marjory, had experience in handling manuscripts because she had been Det Bronk's secretary when he was Editor of the *Journal of Cellular and Comparative Physiology*. For three years she distributed manuscripts to the Editorial Board and to referees. In addition, she assembled the selected manuscripts for transmission to the Rockefeller Press for publication. Most of my work as Editor was done at home on weekends. The people at the Press were very efficient and we had no problems with that part of the team. All financial problems were handled smoothly by the Publications Committee of the Biophysical Society with the aid of a subsidy from the Rockefeller University Press. I was able to concentrate on soliciting manuscripts and selecting the best of those submitted, as an Editor is supposed to do.

After my appointment as Editor was formalized and announced I received advice from many sources. It was clear that biophysics was not a well-defined area of scientific research. One concern was that the new Journal would be overloaded with papers on instrumentation, to the exclusion of more fundamental subjects. This did not occur, then or now. Others thought that papers dealing with experimentally inaccessible mechanisms would dominate the journal. Of course, such phobias were expressed because the new *Biophysical Journal* was considered a force for organizing and defining this specialized way of studying living systems.

The first paper in Volume 1 of the *Biophysical Journal* was written by Kacy Cole and John Moore. This seemed an appropriate editorial decision for several reasons. One was Kacy's self-imposed adherence to the meaning of

"exact" in the term "exact science." Furthermore, the paper exemplified my guiding principle as Editor, if a biological phenomenon can be detected and measured with physical instruments, then it requires and deserves an interpretation based upon the laws of physics. Of course, the paper was bait to lure other authors to submit manuscripts concerning the electrophysiology of neurons and of muscle cells, i.e., the biophysical mechanism enabling sensory-motor integration via the central nervous system. Studies of photosynthesis were well represented in Volume 1. Such photochemical studies of the utilization of sunlight as a source of energy for growth and replication of living cells exemplify the most fundamental area of biophysics, the study of the transient diversion of energy into living systems that temporarily offsets the net entropy production of natural processes.

A Letter-to-the-Editor on page 723 of Volume 1 of the *Biophysical Journal*, signed by three Presidents of the Biophysical Society, stated that although the coverage was not narrow, some important areas of biophysics were missing. The latter were not identified. It is of interest to note changes in coverage during the past thirty years by comparing the content of Volume 1 (1961) with that of Volume 55 (1989). The first volume contains 8 monthly issues in 729 pages. Volume 55 contains 6 monthly issues in 1271 pages, i.e., the number of pages per month has more than doubled. There are numerous papers on some aspect of electrophysiology now as well as thirty years ago. However, the "new" aspect then was measurements upon single cells, whereas now it is on single channels. There are more papers on photobiology in Volume 1 than in Volume 55. Then, as now, investigations of the structure and properties of special molecules, such as DNA, were prominent. A major difference between Volumes 1 and 55 is the numerous papers on bilayers and phospholipid vesicles in the latter. As the three past Presidents wrote thirty years ago, the *Biophysical Journal* is diversified, but there are gaps in its coverage of the field. It seems inevitable that "biophysics is what biophysicists do," as stated by A. V. Hill many years ago. To complete the definition add: "a biophysicist is a person who, for professional reasons, needs both physical and biological insight" (cf. Chapter 1 in *Molecular Biophysics*, R. B. Setlow and E. C. Pollard, Addison and Wesley Publishing Co., 1962).

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