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20. These guidelines are by no means airtight. Unemployment might qualify as an instance of a generic disease. From the standpoint of what is functional in social groups, of course, this is interesting. Other examples might be what we have called "genetic diseases," which appear to weaken the relevance of personal norms. Thus, it seems prudent to allow guidelines such as these to serve as possible necessary features of disease, leaving for future work the task of refining the definition. See (3); T. Parsons, *The Social System* (Free Press, New York, 1951); A. C. Twaddle, *Soc. Sci. Med.* **7**, 751 (1973); M. G. Field, *ibid.*, p. 763.
21. A corollary to the point that groups construct disease and treatment-related procedures needs to be appreciated. The meanings of disease, which societies themselves generate, enter into shaping the behavior of persons who become diseased and this has interesting implications. A trivial one is that behaviors generated by the presumed causes of disease have changed dramatically. Patients no longer report feeling the pounding of evil agencies or hardenings caused by evil winds; instead, they talk about cancerous growths, about the sugar or minerals in their systems, about their nerves or sexual conflicts, and about their needs for special medicines. One also notes that the sense of unity and holism out of which man had approached his living in the world—a unity made clear and poignant through ethnomedical inquiries—has been somewhat altered by intellectual systems that partition him into many separate spheres (for example, the mental, bodily, and spiritual). The expressions of disease among nonliterate is influenced by their holistic orientation, and, as a result, the link which we draw between "organic" versus "functional" pathology is very much blurred. The fragmentation of the individual, which is an ideological feature of modern society, affects the expressions of "contemporary" diseases and causes dilemmas. Maladaptations of the individual tend to conform to (or are partially enacted in terms of) the individual's own model of what he has, and if he believes (or is told) that this is a special type of disease his behavior will reflect this model. In modern American society this has created problems in medical management (see section on Practical Implications of an Ethnomedical Science). See (3).
22. Because behavior may be used as the medium out of which to fashion a paradigm of disease, this does not mean that any disease forms which are developed are "psychiatric" entities. One is driven to raise this objection because in our cultural logic of disease, classes of phenomena, for example, social behavior as opposed to physiological and chemical changes, are by convention differentially entitled, differentially explained, and also differentially valued. Alterations in behavior might be seen as consequences of social factors that involve personality changes whereas physiological and chemical changes might, on the other hand, be seen as somehow more connected to genetic factors. The dualistic orientation of modern biomedicine has, of course, made possible important insights about disease, but at a price that leads to compartmentalization and affects what one observes and does not observe. In forming a linguistic mold which tends to reduce phenomena, dualism thus affects every facet of medical experience including that of physician, patient, and researcher. The important point is that in a holistic frame of reference, behavior and maladaptation per se are important loci of analysis. E. Mayr, *Am. Sci.* **62**, 650 (1974); W. T. Powers, *Behavior: The Control of Perception* (Aldine, Chicago, 1973); E. O. Wilson, *Sociobiology: The New Synthesis* (Belknap, Cambridge, Mass., 1975).
23. The important developments in the forging of the human social language of disease are obviously lost. Consequently, anthropologists and ethologists who study other animals are in a strategic position to study this language. Observations of non-human primates more and more reveal the social and behavioral order which exists in these groups. Matters of vital concern to the individual and group are responded to and communicated about; and when these social activities are carefully analyzed they are seen to possess a biological rationale for the group. Given the centrality of that which we term "disease," one must assume that within these groups something akin to a social language of disease is reflected in the exchanges that occur between members of the group; in a word, disease alters or changes the status of social relations between members in patterned ways. In a sense, these patterned changes in behavior and adaptation constitute protodisease forms, and out of them man has refined his own, using his capacity for symbolization. D. M. Rumbaugh, *Psychol. Rep.* **16**, 171 (1965); C. Bramblett, *Am. J. Phys. Anthropol.* **26**, 331 (1967).
24. H. Fabrega, Jr., and D. Silver, *Illness and Shamanistic Curing in Zinacantan: An Ethnomedical Analysis* (Stanford Univ. Press, Stanford, Calif. 1973).
25. F. M. Burnet, *The Impact of Civilization on the Biology of Man*, S. V. Boyden, Ed. (Univ. of Toronto Press, Ontario, 1970); C. H. Waddington, *The Ethical Annual* (Univ. of Chicago Press, Chicago, 1960).
26. A related problem in medical care involves patients whose medical complaints cannot be easily rationalized in terms of biomedical principles. These patients are themselves referred to as problem patients. Other patients have their own competing "languages" of disease and hence make poor use of biomedicine (whose language they do not understand). Competing languages of disease and an associated fragmentation of the individual also mean that disease cannot be easily rationalized socially and religiously as it can be in nonliterate groups since in our culture disease no longer has a logical link with religion. Besides creating problems in medical management, it can also make the handling of some terminal diseases awkward. Examples of problems such as these can be multiplied. See (3); H. Fabrega, Jr., R. Moore, J. Strawn, *J. Health Soc. Behav.* **10**, 334 (1969); O. Von Mering and L. Earley, *Hum. Organ.* **25**, 20 (1966); S. King, *Perceptions of Illness and Medical Practice* (Russell Sage Foundation, New York, 1962); A. J. Rubel, *Am. Anthropol.* **62**, 795 (1960).
27. H. Fabrega, Jr., *J. Nerv. Ment. Dis.*, in press.
28. Obvious practical benefits of the study of disease and medical care comparatively have not been emphasized. They include, as an example, the understanding that results from the study of (i) the effects of environmental factors on human physiologic functions; (ii) etiologic mechanisms of rare and isolated diseases; (iii) pharmacologic influences of plants, herbs, and other medicines used by a native people; and (iv) the role of symbols and persuasion in medical healing and in behavioral change. A. M. Kleinman, *Inquiry* **16**, 207 (1973); T. Swain, Ed., *Plants in the Development of Modern Medicine* (Harvard Univ. Press, Cambridge, Mass., 1972); A. C. Alpers, *Am. J. Trop. Med. Hyg.* **19**, 133 (1970); P. T. Baker and J. S. Weiner, Eds., *The Biology of Human Adaptability* (Oxford Univ. Press, Oxford, 1966); G. W. Lasker, *Science* **166**, 1480 (1969).
29. This article is based on work supported by General Research Support and Biomedical Sciences Support grants awarded to Michigan State University.

## NEWS AND COMMENT

# Meeting on Unity of the Sciences: Reflections on the Rev. Moon

An international conference on the unity of the sciences has inspired some earnest soul-searching among leading American scientists invited to participate. The cause of second thoughts among some of the scientists is the man behind the conference, the Reverend Sun Myung Moon, a South Korean evangelist and leader of an international religious organization which has been the center of increasing controversy in the United States.

The conference, the fourth devoted to a discussion of problems in the relationships between science and values is sched-

uled to be held 27 to 30 November at the Waldorf Astoria Hotel in New York. The sponsors say that some 360 scientists and representatives of other fields from the United States and abroad have accepted invitations, which include an offer to pay expenses. The list of advisers on the letterhead is long and impressive. A number of Nobel prizes figure in the pedigrees.

Symptomatic of the disquiet is the recent withdrawal of two of four conference "section chairmen" who were deeply involved in planning and organizing the conference. The two were economist Kenneth

E. Boulding of the University of Colorado and Columbia University sociologist Amitai Etzioni. On the other hand, the other two section chairmen, Alvin Weinberg, retired director of the Oak Ridge National Laboratory and now head of the Institute for Energy Analysis in Oak Ridge, Tennessee, and Eugene P. Wigner, a Nobel laureate in physics and emeritus professor at Princeton are carrying on. In addition, Robert S. Mulliken, another Nobel laureate remains as "honorary chairman." (Both Boulding and Etzioni have given permission for position papers they prepared to be used at the conference. Boulding's replacement as chairman is political scientist Morton A. Kaplan, of the University of Chicago.)

Those who are sticking with the conference generally take the same view. They say that the subject is an important one which gets too little attention. At previous conferences, they say, a full spectrum of opinion has been expressed, the quality of

discussion has been high, and there has been no interference from the Moon organization. (Moon's personal part in the forthcoming conference will reportedly be limited to a brief appearance to make some opening remarks in the form of a welcome to participants.)

Weinberg, for example, says that the invitation to be section chairman came from Wigner and that he accepted because the focus of the conference was the unity of the sciences and the importance of ethical and moral values in science, a subject with which he is especially concerned. He says that he had known virtually nothing about the Moon organization but talked about previous conferences with people involved in them and read the proceedings and felt they had been "good meetings." Weinberg says that, as a section chairman, he was offered an "honorarium" of \$3000 but that he declined it.

Those who declined invitations or have dropped out after accepting give a variety of reasons. Some argue that participation in the conference by well-known scientists and other scholars lends credibility to Moon and his organization. Some are critical of the methods they say are used by Moon's Unification Church to proselytize and retain members. Others charge that Moon has close ties to the present authoritarian regime in South Korea. Still others object to the financing of the conference with funds they say the Moon organization derives mainly from street selling by young members.

#### Letter of Reassurance

Although Etzioni subsequently resigned from his section chairmanship, as recently as 13 July he was a cosigner, along with Boulding, Weinberg, and Mulliken, of an open letter assuring prospective participants that the organizers of the conference had been allowed "complete freedom of expression, agenda, and organization."

Etzioni says that his decision to withdraw was influenced heavily by the realization that a number of people disengaging themselves from the conference had liberal leanings, so that "it was no longer a balanced conference." In addition, he says that Moon people were "moving into the forefront," and that new literature on the conference gave greater prominence to the Unification Church and to Moon. Etzioni also says many of the charges leveled at Moon are undocumented, but that in the case of allegations of Moon's involvement with the CIA he "saw no way of clearing it up," and that disturbed him.

Another dropout was Edward E. David, Jr., former presidential science adviser and now a vice president of Gould, Inc., of Chi-

cago. David had been recruited last spring as chairman of a committee to discuss the effects of sources of funding on the conduct of research. David says that, as he learned about the conference and its sponsors, a number of questions bothered him, but that he decided to withdraw because of his misgivings about funding. Specifically, he says he was concerned about where the money came from, how it was collected, and whether the donors knew what it would be used for.

A nonscientist who renounced a committee chairmanship was Roger Shinn, president of Union Theological Seminary. Shinn says that he was "ideologically miles away from anything Moon represents," but that he was persuaded to participate in the conference by the caliber of the section leaders and other planners of the meeting. He says he felt that the subject of the conference was a "legitimate" one and that "we need more conversation between scientists and humanists. What mattered was freedom and good leadership." However, when leaders he knew personally and respected highly—Boulding and Etzioni—withdraw, he decided that "the conference was getting skewed," and also pulled out. (Shinn has been replaced by philosophy professor Frederick Sontag of Pomona College.)

The conference sponsors' reaction to criticism has been low-key. Michael Young Warder of the Moon-initiated International Cultural Foundation, who is secretary general of the conference, says that "we know there has been a lot of controversy over sponsorship, but we hope that people will turn to the actual issues." Warder says, "We feel it is healthy that there be other sources of funding for science than established institutions," and notes charges that some National Academy of Sciences reports have reflected industry or government-agency influence. He said that outside sponsorship should be beneficial to a discussion of science and values.

There seems to be no effort to conceal the sponsorship of the conference, although the Moon connection is hardly emphasized on the letterhead or in the brochure that accompanied the invitations. Recruiting seems to have been carried out primarily through the old crony network by which many conferences are organized. The official sponsoring organization is the International Cultural Foundation, which is essentially an arm of the Unification Church but funds general philanthropic and cultural causes as well as supporting activities more closely connected to church interests. Information on the conference is being handled in a straight-

forward fashion by a New York public relations and public affairs agency, Burson-Marsteller.

The official theme of the conference is "the centrality of science and absolute values." The purpose as stated in the invitational brochure is as follows:

"... [T]he purpose of this Conference is to provide an opportunity for the world's most eminent scholars and scientists to reflect on the nature of scientific knowledge and to discuss the relation of science to a standard of value. Such an historic purpose necessitates that the participants attempt to find a central standard of knowledge and also to show how such a standard might be utilized to relieve mankind from unnecessary misery and destruction."

#### Appeal to Young People

Moon's Unification Church in recent years has won thousands of members in the United States and other countries. It offers a blend of religious idealism and highly structured group discipline which apparently has a particularly strong appeal for some young people of high school and college age. The church recently has figured in news stories about attempts to "deprogram" young members allegedly subjected to psychological conditioning. In a court case in Washington, D.C., in August, for example, parents of an 18-year-old girl charged that the Unification Church had exercised such influence over their daughter that it prevented her from functioning under her own free will.

Critics say that the church has aspects of a personal cult built around Moon. Witnesses at the Washington trial said that adherents of the church regard Moon as the Messiah returned but that they stop short of making the specific claim in the group's literature and meetings.

The Moon organization is said to have built a strong financial base. Its holdings include an estate at Tarrytown, New York, which is the foundation's U.S. headquarters. Funds come from private contributions and from street sales of items such as candy, flowers, and candles by young members.

Many of the scientists invited to the conference were obviously unfamiliar with the Moon organization. Many apparently reacted as members of an academic community, which believes in free discussion and is accustomed to being the beneficiary of university endowments and private foundation grants derived from fortunes accumulated in ways of which they may disapprove. Nevertheless, as Moon comes more clearly into view, a lot of conference stars are fading.—JOHN WALSH