

**2-3 July**

## **Science, Development, and Human Values**

The poorer areas of the world are developing in the sense that such indicators as gross national product, industrial production, and energy consumption are increasing. Even on a per capita basis these indicators have come close to doubling in the past 20 years. At the same time on a per capita basis the economies of the poor countries are growing no more rapidly than those of the rich. Viewed in absolute terms, the gap between the rich countries and the poor is widening at an alarming rate and if present trends continue the peoples of the world appear destined to remain divided into two quite separate groups: the affluent minority and the deprived majority. Further, within the poor countries themselves increased production is being distributed inequitably with the result that the gap between the rich and the poor appears to be increasing there as well.

Arrays of problems of extraordinary complexity are appearing in both the rich countries and the poor. The rich are suffering from the environmental effects of their vast consumption of energy and other raw materials and from a dwindling resource base. The poor are suffering from the consequences of rapid population growth, rapid urbanization, increasing unemployment, and inadequate expansion of agricultural and industrial production.

The prognosis for man's future is sufficiently alarming to warrant a re-examination of development goals and of our approaches to their attainment. Numerous questions come to mind. Where have the rich nations and the poor ones gone wrong in their efforts

since World War II? What lessons have we learned? Should the goal of the poor countries continue to be to create an urbanized, industrialized imitation of the rich countries as they are today, or should those goals be dramatically altered? How can we determine the basic needs and wants of peoples, set national priorities, and ensure optimal concern for human welfare? To what extent and how can science and technology contribute to the solution of these problems? What are the most urgent research priorities?

Some of these questions will be examined at the symposium on "Science, Development, and Human Values," which will focus primarily on Latin American countries. At least two-thirds of the participants are Latin American scientists, engineers, and philosophers who have been concerned with development programs and the process of social change.

The 2-day symposium, which will take place 2-3 July in Mexico City, has been organized by Victor Urquidi (El Colegio de Mexico) and Harrison Brown (National Academy of Sciences).

The symposium will feature Victor Urquidi and Kenneth Boulding (United States) on "Where have the rich nations

and the poor nations gone wrong?," Carlos Mallman (Argentina) on "Human values and happiness: Basic wants and needs," José Valenzuela (Chile) on "Research priorities for economic development in Latin America," and Luis Manuel Penalver (Venezuela) and Harvey Brooks (United States) on "The value of science and technology to human welfare."

The chairperson for the first session is political scientist Olga Pellicer de Brody of Mexico; discussants include Antonio Bacigalupo, Hollis Chenery, Enrique d'Etigny, and Rodrigo Botero.

The chairperson for the second session is sociologist Renée C. Fox of the United States; discussants include Luis Villoro, Leona Baumgartner, David Ibarra, and Norman Borlaug.

The chairperson for the third session is chemist Eloisa Mano of Brazil; discussants include George Bugliarello, Gerhard Jacob, Marcos Kaplan, and Marcos Moshinsky.

In the final session the co-organizers will review the major conclusions and recommendations emerging from the discussions.

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**2-3 July**

## **Health Services**

The notion of health services as a system raises a number of questions whose answers lie, in part, in science and technology. What are feasible goals for the health services, and what resources and organization will be needed

to achieve them? What are the potential contributions of technology to the quality and productivity of health services? How shall we use our present scarce resources to best advantage? These questions will be answered in

the symposium on health services (2-3 July).

The last of these questions is approached by identifying those areas of health services where research is needed: organization and decision-making in clinics and ambulatory services, the staffing and supervision of care in hospital wards, the productivity of laboratories and other supporting services, and the coordination of all of the organizational elements in the system.

Technologies for introducing technological innovation and for evaluating the effects of new programs will be discussed. To some extent these techniques are drawn from the experience of the behavioral and managerial sciences in industrial settings, but the roles of patients and physicians force important modifications. It is relevant also to assess the potential assistance of

computerized data bases to the decision processes of physicians and administrators. A goal of the first half of the symposium will be to examine the mechanisms of coordination of the many health care delivery services that protect and promote the health of the population.

The second half of the seminar will be devoted to planning. In most communities the present array of health services are not adequate to the needs of a growing population. They may lack the capacity, the distribution, and the coordination required for comprehensive care. The awareness of the need for planning of health services is strong throughout the Americas. Increasingly sophisticated planning models and methods are being developed. Such models take into account forecasts of population change; the effects of the physical, economic, and social environ-

ment on health; and the economic and behavioral factors influential in transforming need to demand. They also consider political factors and the competition of other human needs for national resources. Converting a statement of needs for health services into a plan calls for tests of feasibility and for inquiry into manpower training requirements and the organization structure for placing responsibilities upon national and regional levels and upon the individual whose health is at stake.

The sponsor of the symposium is the Operations Research Society of America. Coordinators are Charles D. Flagle (Johns Hopkins University), Luis Castelazo Ayala (Mexico), and Jorge Ortiz (Mexico).

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## **26-27 June**

### **Neurohumoral Coding of Brain Function**

Important discoveries are being made today along a wide front of research pertaining to the function of the brain. In consideration of this fact, a symposium (26-27 June) will be devoted to a discussion of a number of significant highlights in this scientific endeavor. All of the invited participants have been involved in the investigation of some aspect of a chemical mechanism underlying a specific neural system. As a result, current evidence on the possible basis for neuronal "coding" of cerebral function will be presented from molecular to molar viewpoints: at the intracellular, extracellular, and transsynaptic levels as well as within different anatomical regions.

Participating in the first section will be R. Tapia (Mexico), P. McGeer (Canada), F. Bloom (United States), D. J. Reis (United States), and J. W. Phillis (Canada). They will discuss the molecular and cellular events related to cerebral excitability, axoplasmic transport, inhibition in the cerebellum, dynamics of catecholaminergic neurons, and cholinergic transmission in the cerebral cortex. In the second section, involving M. Russek (Mexico), R. D. Myers (United States), V. Alemán (Mexico), L. Stein (United States), and I. Izquierdo (Argentina), basic research findings will be described on the neuro-

humoral mechanisms within different regions of the brain involved in vital regulatory functions; these include feeding, drinking, body temperature, epileptogenic seizures, reward, and punishment. The third session will integrate information on the essential neurochemical factors in connection with complex cerebral functions including sleep, wakefulness, vigilance, conditioning, and memory. The speakers will be H. Brust-Carmona (Mexico), J. McGaugh (United States), M. Monnier (Switzerland), R. R. Drucker-Colín (Mexico), M. Radulovacki (United States), A. Fernández-Guardiola (Mexico), and P. Morgane (United States). The final session will integrate information on normal and pathological behavior. H. Himwich (United States), H. Sabelli (United States), R. Broughton (Canada), A. G. Karczmar (United States), and

E. Roberts (United States) will discuss a set of topics including the role played by biogenic amines and neuroendocrine substances in the conditions of schizophrenia, depression, inhibition, and other behavioral states.

Co-arrangers of this symposium are R. R. Drucker-Colín (Mexico) and R. D. Myers (United States).

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## **4 July**

### **Behavior and Violence**

Co-arrangers: Santiago Genovés (University of Mexico) and J. P. Scott (Bowling Green University, Bowling Green, Ohio).

The symposium is concerned with violence and behavior, not only on a biological or sociological level, but also on the integration and interaction of both. Papers will attempt to establish the present state of knowledge and suggest roads for future research. Standardization of terminology within this field will also be discussed.

Participants include A. Fernández-Guardiola, J. M. Velazco-Alzaga, R. Díaz-Guerrero, J. Saxe-Fernández, R. Tamayo, B. Ginsburg, F. H. Bronson, K. Pribam, R. Holloway, E. Rubinstein, and S. Ball.

**Registration  
and Travel Forms  
for Mexico City  
are in the  
23 March issue  
of SCIENCE**