

The AAAS faces life in the city by the bay

“Where little cable cars climb halfway to the stars”
scientists debate the future while riding some of
oldest still extant urban transportation in the world

Like an intellectual chautauqua, the annual meeting of the American Association for the Advancement of Science still pulls in the academic faithful for an increasingly varied road show of the issues surrounding science, but actions on the frontiers of research have increasingly taken second billing. The trend was particularly clear at last week's meeting in San Francisco, as some 4,000 delegates turned, more than ever, to the question of what effect the present sweep of events will have on science and the future of humanity.

Chief among these events, of course, is the energy crisis, which was discussed in one or another of its aspects throughout the week. But energy is only one of many commodities growing scarce and the resulting “crisis” is also probably only the first of many. A primary focus of the meeting, therefore, was an attempt to predict future problems, coupled with efforts to integrate traditional scientific disciplines with those of economics and political science, in order to find broadly based solutions.

The meeting had a sober tone and, for the few radicals who bothered to attend, one much more rational than in years past. The radicals held their own sessions, blaming American science for “disruption of healthy nutrition” in underdeveloped countries, for using behavior modification and psychosurgery as “repressive techniques” here at home, and for being generally in collusion with the vested interests of big industry. But unlike previous years, radicals staged little formal protest and only one arrest was made, following a demonstration at a discussion on inherited I.Q. Whether the lack of protest reflected the prevailing campus calm, or a disenchantment with the AAAS meeting as a viable forum for dissent, remained unclear.

One special interest group within the AAAS demonstrated new confidence and activity. The AAAS Women's Caucus announced plans to establish an employment registry for women scientists

and to initiate a new study on educational opportunities for women and minorities. The group this year became an official member of the Federation of Professional Women's Organizations and a steering committee intends to map out a series of proposals to be presented to the Council of the AAAS, outlining a more active participation in the unique concerns of women by the organization. For the first time in several years, the incoming AAAS president is a woman, anthropologist Margaret Mead.

Now that the world has finally entered the “Orwellian decade,” leading to 1984, outgoing AAAS President Leonard M. Rieser noted that the key to repression in the apocalyptic book was a denial of both science and justice. “They are closely coupled,” he said, “and we who are concerned with the advancement of science must commit ourselves to both to avoid disaster. . . . Scientific inquiry is an expression of freedom.” Recent manifestations of encroaching danger, he said, include the rise of government “doublespeak,” in which real problems are obscured or declared solved by semantic tricks, and where attempts are made “to rewrite history by denying bombing raids or distorting file copies of cables.” But most of all, inescapable problems such as exhaustion of natural resources and proliferating pollution cannot be solved by “using complex and obfuscating language in declarations that are later ‘rendered inoperative.’”

Several speakers tried to assess what future is in store for the world and for science, and they arrived at very different projections. The most optimistic view was that of Genn T. Seaborg, former chairman of the Atomic Energy Commission and a Nobel laureate chemist. “By the mid-1990's,” he concludes, “we should be well on our way to making the transition from an ‘open-ended’ world to a ‘steady state’ one.” Such a world will be characterized by a highly disciplined, “straight” society, in which the current wave of permissiveness, violence and self-indul-

gence will have been rejected in favor of a highly cooperative attitude, marked by “non-neurotic self-control” and “an almost religious attitude toward environmental quality.” Crises will be overcome, with “progress toward a successful international community spearheaded by the economics of multinational industry, new international trade arrangements that improve the distribution of resources, and a high degree of scientific and technical cooperation.”

Almost point for point, Seaborg's thesis is challenged by the view of futurologist Theodore J. Gordon that at least five major crises await us over the next 20 years. First, he sees indications that the “balance of terror” is becoming less stable, with proliferating weaponry making “measured-response,” limited warfare more likely. As population increases while agricultural export potential becomes more concentrated geographically and more energy intensive, food shortages may increase to dangerous proportions. Natural climatic changes, with a general cooling trend and possibly a new ice age, seem to be conspiring with artificial degradation of the environment to make farming more difficult so that artificial growing environments and manufacture of synthetic soil may be commonplace by the mid-1990's.

Unlike Seaborg, Gordon says multinational companies must be even more closely scrutinized to see that their policies do not make the present maldistribution of international wealth any worse. Even more insidious, he says, is the growth of international cartels, such as the Organization of Petroleum Exporting Countries, which may already have brought underdeveloped countries to “the verge of disaster.” As material resources continue to decline, only direct government intervention in international trade may be able to forestall further blackmail; but whatever the outcome of the intervention, galloping inflation will almost surely continue.

Certainly other crises will also erupt, Gordon concludes, but those he names

seem inevitable. "They cannot be avoided. Each in its own right presents enormous and unique difficulties; together, they form an unholy fabric which challenges our credulity."

Reflecting the increasing acceptance of economics as one of the sciences, and the need for considering economic impact together with other factors in facing many present-day technical challenges, the AAAS meeting invited participation by several economists, who briefed delegates on the implications of their discipline for future technological development.

In a talk entitled "The Dismal Science Comes of Age," University of Pittsburgh economist Marina V. N. Whitman warned delegates that the crises of the remaining part of this century can only be met successfully if their burden can be more evenly distributed—part of the world must not starve while another part makes off with the wealth. Environmental controls, exploitation of natural resources, technological and industrial development all require economic and political trade-offs, and the science of economics has not yet been able to keep up with predicting and analyzing what these trade-offs will involve. The result, she declares, is "stagflation," the simultaneous rise of inflation and unemployment. "The awkwardness of the word reflects the awkwardness of a situation with which no one knows quite how to cope."

While Whitman was applying to technological advancement the old economists' saying about trade-offs: "There is no such thing as a free lunch"; another economist seemed to be reviving for new application, the gloomy observation: "The rich get richer and the poor get poorer." Irma Adelman of the University of Maryland calls the result of her research on the technological development of underdeveloped countries "rather depressing." A global "Catch 22" seems to be operating, in which the benefits of science and technology are most effective in countries that are already industrialized. When underdeveloped countries try to increase the educational level of their citizens or redistribute wealth through land reform, productivity drops and they fall farther behind the developed nations.

Perhaps the meeting was best summarized by a San Francisco masseuse who was interviewed by a local paper. Scientists' shoulder muscles seemed "awfully, awfully tense," she reported, and delegates generally seemed "very uptight." Maybe they were just beginning to realize the magnitude of the struggle various speakers promise lies just ahead: that, in the ominous words of Rieser, "There is no place or time in which to hide." □

Feminists on the firing line: Medicine is male chauvinist



John H. Douglas

Steinem: Prescribing for women.

In addition to job, salary and educational discrimination, women's liberation groups charge that a female is also more likely to receive condescending and discriminatory treatment in a doctor's office. First in a seminar on Sex Differences in Health Care, at the AAAS meeting in San Francisco, and later in a paper given to the annual meeting of the California Medical Association, feminists last week aired their complaints and suggested solutions.

The seminar focused on how to get doctors to become more sensitive to the psychological needs of their female patients, particularly in the areas of venereal disease and mutilating surgery, such as breast removal. Both doctors and patients may unconsciously be adopting outmoded sex stereotypes in their relationships, resulting in alienation of women from the male dominated medical profession. Having more

women become doctors may help solve some of the problems, speakers concluded, and lay clinics staffed entirely by women may also play a role. One lay group reported having performed 11,000 abortions and claimed as low a rate of medical complications as most hospitals.

Some 200 doctors at the annual meeting of the California Medical Association, heard feminist Gloria Steinem say that a paternalistic attitude too often pervades their relationships with all of their patients, but that women are most susceptible. Steinem claims doctors do not listen to their patients enough, treat what they say with skepticism and then prescribe treatment without giving the patient either a choice or an explanation. Patients have basic rights as consumers, she maintains, and the first right is that of having a full explanation of one's disease, including the possible effects of various treatments. Only then, Steinem says, can patients make an informed choice, as is their right, concerning what treatment to accept.

Steinem believes that admitting more women to medical schools will eventually help female patients, and in the meantime, may combat sexism in these schools. She said women at one medical school complained that attractive female models in bikinis were being used for classroom demonstrations, to the accompaniment of lewd remarks. Other women medical students were angered at being excluded from certain specialties, such as urology and surgery.

Medical discrimination is only part of a "cultural conspiracy" in which we all unconsciously have taken part, Steinem concluded. This conspiracy has bound women to stereotypes of ignorance and servility, and the greatest accomplishment of the feminist movement, she said, has been to raise society's consciousness of this fact. "What we are learning is that everything is political," including patients' rights. □

Would you buy a used car from a scientist?

The period of public disenchantment with science prevalent in the late 1960's and early 1970's is over, and the trend is now in the other direction, says a noted sociologist of science.

Amitai Etzioni, director of the Center for Policy Research at Columbia University, says science is now ranked second only to medicine among institu-

tions for which the public has "a great deal" of confidence. Etzioni presented to the San Francisco meeting of the AAAS an analysis of recent public opinion polls indicating attitudes toward science and other institutions of our society.

"The antiscience and antimodernity feelings have peaked and now turned,"