on the adequacy of the eyesight of the man assigned to guard the chicken coop." Jenkins, whose board has been asked by Parker to investigate the matter, noted that two of the men excluded from the committee—namely Bandura and Berkowitz—"have produced research suggesting that children who see violence are more likely to commit it as they model their behavior on the aggressive action they have seen."

Several psychologists interviewed by *Science* cited the great difficulty of establishing what effect television really has on children, particularly since it is difficult to isolate the effect of television from the numerous other influences that determine a child's attitude toward violence. Rubinstein of NIMH, who heads the small staff which is serving the Surgeon General's committee, said he hopes the data developed by the committee will be persuasive enough so that any reasonable scientist would draw the same conclusion from it. But critics of the committee suggest that the research results are apt to be somewhat inconclusive and ambiguous. They express concern that the members of the committee will thus have great scope to exercise their alleged biases in interpreting the results. No firm date for completion of the study has been set, but a report of some kind is expected to be produced within a year or two. The controversy has presumably made committee members well aware that their objectivity will be under close scrutiny.

—PHILIP M. BOFFEY and JOHN WALSH

VW Foundation: Money Giver on the European Scene

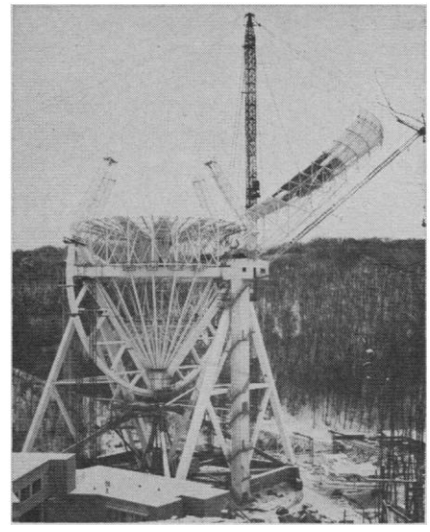
Hannover, West Germany. The big philanthropic foundations that play an important role in financing education, research, and cultural affairs in the United States have few counterparts in Europe, where government has long been the prime patron of these activities and where great private wealth tends to be unconcerned about doing good works. The most prominent exception—and one that is making itself felt not only in its native West Germany but also throughout the world—is a direct consequence of that fantastic postwar phenomenon, the Volkswagen automobile. It is the Volkswagen Foundation, founded in 1962 as a legal entity that is separate from the Volkswagen Company but is nevertheless a direct beneficiary of its vast financial success. Compared with the giant of them all, the multi-billion-dollar Ford Foundation, which gives away some $245 million a year, the VW Foundation is relatively small. Last year it spent about $27 million. But in assets and expenditures it compares not unfavorably with such renowned landmarks of philanthropy as the Rockefeller Foundation (assets, $373 million; grants and other expenditures, $46 million), the Carnegie Corporation (assets, $300 million; grants and other expenditures, $12 million), and the Sloan Foundation (assets, $300 million; grants and other expenditures, $18 million). And since there are very few organizations to compare with it on the European scene, its potential for influence is perhaps all the greater.

The VW Foundation's assets consist of an endowment fund of about $270 million, plus the annual dividends from about 36 percent of the VW Company's stock. This setup was started in 1959, when the West German government, confronted with the problem of what to do with the booming firm that it had inherited from the Nazi era, decided to make it a joint stock company. Sixty percent of the stock was sold to the public, and the proceeds were set aside as an endowment for the proposed Foundation; most of the remaining stock was equally divided between the federal government and the state of Lower Saxony, where the Foundation's headquarters and VW's corporate headquarters and principal production facilities are located. With its revenue coming from interest on the endowment and dividends from the stock, the Foundation is at the top of Europe's giveaway league, according to the *1969 Directory of European Foundations* (published by the Agnelli Foundation, Via Principe Amedeo 34, Torino, Italy, 550 pp., $10). Since foundations are possibly the most deliberately inscrutable of arrangements for handling wealth, the standings may be open to question. But, according to the Directory, the little-known Gulbenkian Foundation in Portugal was tops in Europe in total assets for 1967, with $303 million. For that year, it reported expenditures of only $15.7 million. These funds were reportedly given for the arts and for educational, scientific, and charitable purposes, mainly in Portugal and Armenian communities throughout the world. West Germany's newly founded Krupp Foundation was third, with reported assets of $125 million, but it had not yet made any significant expenditures. Fourth was Great Britain's Nuffield Foundation, with assets for 1965–66 reported at $82 million and with expenditures of $5.2 million.

What has the Volkswagen Foundation been doing with its money? It seems that, in line with postwar Germany's quest for tranquillity, it has been proceeding cautiously by backing useful but uncontroversial projects, very much like the pre-Bundy Ford Foundation. (There are no formal ties between the two foundations, but the VW Foundation staff, numbering about 100, inevitably looks with interest on the work of the world leader in philanthropy. When VW moved into new headquarters last year here in Hannover, the Ford Foundation was represented at the dedication ceremony by Mark F. Ethridge, a retired trustee.) One of VW's largest single projects, totaling about $25 million over 7 years, is for the construction of housing for middle-level academic staff at universities. Another $10 million is to provide guest houses for foreign visitors at universities. There is a $20-million program, stretching over several years, to encourage students to enter careers in science teaching. In the well-established foundation pattern of moving into promising scientific and technical fields that may be slow to benefit from the workings of government bureaucracy, the VW Foundation is supporting the establishment of departments of biomedical engineering at the Technische Hochschule at Aachen and at Erlangen University near Nuremberg. And it also provides general support in this field. VW can take credit for the dominant position that West Germany will oc-

cupy in radio astronomy when a 100-meter fully movable dish—believed to be the largest in the world—goes into operation near Bonn next fall under the direction of the Max Planck Institute. The Foundation provided funds to get the project under way and is paying more than three-quarters of the $8.6-million construction cost, with the remainder coming from federal and state sources and the Max Planck Society. (The telescope project has proceeded precisely on schedule since ground was broken in the summer of 1968; and there has been none of the anguish, wrong turns, or inaccurate cost estimates usually associated with such complex construction projects. In fact, the industrial combine that is building the telescope is so confident of its ability that it is now offering to duplicate the telescope for other customers—with delivery guaranteed in 22 months.)

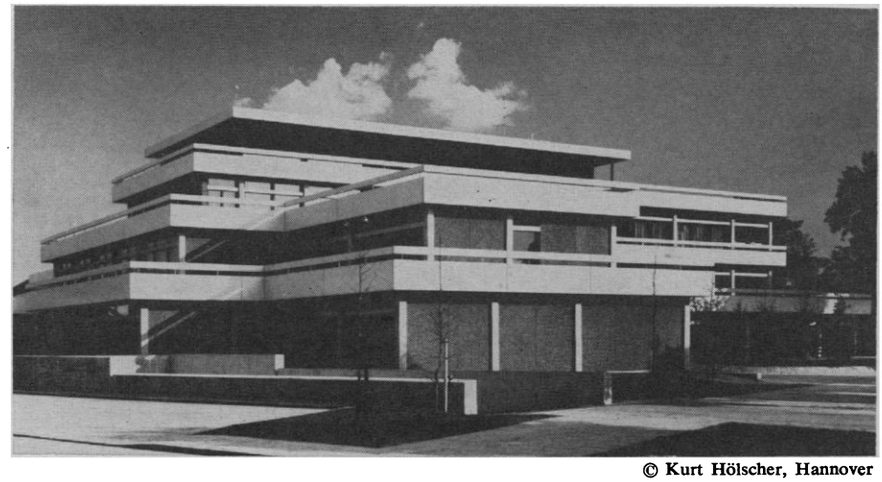
The Foundation is also active in the humanities and the social sciences, which together absorb about 30 percent of its expenditures. It provides support for research on East Asian and Latin American history, language, and politics. It is supporting the preparation of new standard editions of half a dozen classical composers and of an encyclopedia of comparative civil law. The activity that has produced the most controversy, though apparently not very much, is also the only operational program directly under the Foundation's auspices. This involves an organization housed in its Hannover headquarters, which was founded for the purpose of collecting statistical information about higher education in West Germany. Since the universities are self-governing bodies within highly autonomous states, the federal government has fared poorly in its own efforts to assemble a statistical picture of what is actually going on in the turbulent field of German higher education. VW has 30 people and a computer trying to collect information on enrollments, classroom use, courses of study, teaching schedules, and similar information that is deemed desirable when there is a mass demand for higher education. Germany's powerful left-wing student movement is naturally suspicious of such information gathering, but so far the main difficulty is not the students; rather, it is the traditional reluctance of the universities to give outsiders a look at their operations. As one VW staff member put it, "It is easier for us to do this than it is for the federal government, but it is still very difficult."



Construction of the world's largest, fully movable radio telescope, near Bonn, financed mainly by the VW Foundation.

Like the major foundations in the United States, the VW Foundation is also active in international affairs, and, since there is a dearth of risk capital for learned purposes in Europe, VW has on occasion been the difference between birth and demise in European cooperative efforts. For example, VW money helped the European Molecular Biology Organization come into existence and remain alive until substantial funds from member governments were forthcoming. VW money has even reached the United States. It helped with the establishment of an Institute of German Studies at the University of Indiana, Bloomington, and, when the library there was damaged by fire, the Foundation provided a special grant to assist with rebuilding it. The Institute of Strategic Studies in London has received a 3-year grant of over $200,000 from VW, and money has also been given to promote peace research at the United Nations. Scientific research in Israel is among the beneficiaries of VW's largesse, and scientists in that country express deep gratitude for the Foundation's support. Curiously, though, they describe themselves as the recipients of funds far in excess of the sums that are cited by VW Foundation staff members. The origin of this discrepancy may simply be a matter of innocent misunderstanding; everyone involved seems quite pleased with whatever is happening. It has been suggested that some German funds, perhaps propelled by guilt but legally not for philanthropic purposes abroad, are being dispatched in roundabout ways, but VW officials insist that they give only their own money and that the amounts are known.

The manner in which VW makes its granting decisions is no more visible there than at any other philanthropic organization. According to staff members, projects originate both inside and outside the Foundation. Most, if not all, are reviewed both by staff members and by panels of outside experts. The final decision formally rests with the Foundation's 14-member board, which is equally divided between appointees of the federal government and of the state of Lower Saxony. Lower Saxony appoints the chairman, currently the State Minister of Culture. Among the members is the general manager of the Volkswagen Company, a labor leader, and a variety of academics, including several scientists. The general director, E. h. Gotthard Gambke, is an engineer by training and was with the German Research Association prior



Headquarters of the Volkswagen Foundation in Hannover.

to taking his post when the Foundation was established.

Some foreign observers will no doubt look upon the VW Foundation as another example of what they consider to be West Germany's smooth and self-assured climb to economic eminence. But relatively prosperous as it is, West Germany seethes with rational dissatisfaction over inadequacies in education, social services, housing, and even in the support of scientific research. Too little, maybe too late, almost certainly too cautious—perhaps that is how the VW Foundation should be regarded, rather than as a smooth-running cog in a brilliantly functioning machine.—D. S. GREENBERG

Nixon Advisers Call for Better Integrated Science Support

American science needs not only more money but a better planned and integrated program of federal support, according to the President's Task Force on Science Policy, a group commissioned by President Nixon last October to review federal science policy.

In its recently released report, entitled "Science and Technology: Tools for Progress," the task force* suggests that now that the rate of growth of federal support for scientific research and graduate education has slowed, weaknesses in the "unintegrated management" of that support have been forced into view. The task force calls for doubling the budget of the National Science Foundation (NSF) and for a reassessment of the need for support of certain kinds of research abandoned by the mission-oriented agencies.

It recommends that support for NSF be equivalent to 0.1 percent of the gross national product (GNP). Given the current GNP of about $960 billion a year, this would mean that the NSF budget would be increased from its present level of $463 million to nearly $1 billion. The NSF, which now provides one-eighth of all federal support of fundamental research and one-sixth of the federal support of academic research, would be responsible for providing about one-third of all federal support for research in each of these categories.

The task force says that the mission-oriented agencies should continue to fund some basic research on their own, with the Office of Science and Technology (OST) designated by the President to establish priorities among competing research programs. The panel cautions the Defense Department against an overly narrow interpretation of the Mansfield Amendment, which forbids the Department to fund "any research project or study unless such project or study has a direct and apparent relationship to a specific military function." Although this statement is termed "not unreasonable" by the task force, it warns against "a myopic interpretation" of the bearing of basic research on defense problems. "The close and multiple contacts back and forth between basic research, applied research, and applications themselves, and among Governmental, university, and industrial groups which the United States has achieved is the envy of most other nations," the report says. "The philosophy on which these contracts have been made and maintained seems now to have been forgotten as various forces inside and outside of Government seem intent on dismembering our present very effective system."

Warning against the possibility of "technological surprise," the task force also recommends that the President emphasize research and development for national security, "even at the expense of current military hardware procurement, if necessary." Further gains in defense research and technology will be necessary to dissolve the "Iron" and "Bamboo" curtains, to enable the United States to react quickly to changed circumstances, and to reduce the total costs of military projects and weapons, the panel says.

The task force recommends that Congress adopt policies providing more generous, evenhanded, and predictable support for graduate scientific education. The panel is in general accord with a 1969 report by the National Science Board (NSB) calling for more aid in the form of fellowships and institutional and departmental grants. Currently, 75 percent of federal support to graduate education is in research project grants.

The task force urges that OST develop a federal structure for technology assessment, in keeping with two recent reports to the Congress on this subject by the National Academy of Sciences (*Science*, 5 September) and the National Academy of Engineering (*Science*, 14 November). The proposed technology assessment effort would be part of a larger effort to make more effective use of science and technology in attacking social, urban, and environmental problems. The task force suggests that each government agency or department develop specific goals and draw up a 10- to 15-year plan for achieving them. Requirements for basic and applied research and the methods of meeting them would be identified and stated in a manner understandable to universities, business, and labor. Much of the work necessary to achieve the goals calls for the talents of social scientists, and the OST would be expected to strengthen its resources in the social sciences.

The task force recommends that the President's science advisor develop a broadly based program for the shaping of national science policy. "A specific deficiency in the way we arrive at national goals and priorities is that science and technology inputs come mainly from universities and nonprofit organizations," the report says. "Formulation of national science policy should seek wider participation from private industry, labor, and the professions."—NANCY GRUCHOW

*The chairman of the task force is Ruben F. Mettler, president of TRW, Inc. Other members are Warren G. Bennis, vice president for academic development, State University of New York at Buffalo; Theodore L. Cairns, assistant director, Central Research Department, Du Pont Experimental Station at Wilmington, Del.; Elmer W. Engstrom, chairman of the Executive Committee, RCA Corporation; Solomon Fabricant, professor of economics, Graduate School of Arts and Sciences, New York University; Robert J. Glaser, dean, Stanford University School of Medicine; Philip Handler, president, National Academy of Sciences; Oscar Ruebhausen, Debevoise, Plimpton, Lyons & Gates of New York; Bernard Schriever, Schriever & McKee Associates, Inc. of Arlington Va.; Chauncey Starr, dean, School of Engineering and Applied Science, University of California at Los Angeles; H. Guyford Stever, president, Carnegie-Mellon University; Charles H. Townes, professor-at-large, Department of Physics, University of California at Berkeley; Alvin M. Weinberg, director, Oak Ridge National Laboratory.

The report may be obtained for 35 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.