The great majority of senior members of the university welcome these gifts as, of course, they deserve to be welcomed. A few complain that they will alter the character of the university considerably and, probably, for the worse; a few wish the offer had been entirely unconditional or, alternatively, that their own department or subject had been in the position of medicine, physical chemistry or social studies. As regards the last, it is realized that the success or failure of the new college will depend much on the start it gets and, in particular, on the first warden and fellows. A long and carefully drafted letter from Lord Nuffield to the Vice-Chancellor gives some ideas of the intended college and its fellows, and others have been got from some of the principal Oxford men who are concerned. The new college is to be mainly a post-graduate one, like All Souls', with accommodation for, say, fifty residents, and principally for research and investigation. It need not be entirely devoted to social studies; other subjects may be considered. It is not intended that it be a teaching institution in the ordinary sense or that it should train undergraduates for business careers, still less that it should be a place where the newly graduated may start to research according to their fancy. It is hoped that the fellows will be mature workers, brought back after they have been out in the world for some years, to do large-scale team work on those social subjects on which research is urgently needed. The new college, it is hoped, will not merely be a center for these activities in economics, politics, anthropology, sociology and the like, but also a place where men of business and affairs, by residing there, will have an opportunity of contributing their experience to the common fund. This cooperation of academic and non-academic persons in attacking problems in the social sciences is regarded as valuable by those who, with Lord Nuffield and the Vice-Chancellor, have been thinking of the welfare of the new college. It remains to be seen how Oxford makes use of these gifts, which bring, of course, their difficulties and responsibilities with them. That it will rise to the occasion no one who knows the temper of young Oxford at the present time will question.—*Nature.*

SCIENCE AND DEMOCRACY

YOUR recent editorial "Science and Democracy" begins with the words "Science as we know it is the child of democracy." From the point of view of a man of science the family relationship is here reversed: Democracy is the child of science. I quote from a convocation address with the same title as your editorial given at the University of Indiana in 1912:

> Without science our present civilization would not have been possible. It is the application of science to commerce and the arts that has created democracy. So long as food, clothing and dwellings were produced and transportation carried forward by unaided manual toil, so long as plague and famine, disease and premature death, were unchecked, it was impossible to give equal opportunities to all. Plato had to provide slaves for his republic; serfs and peasants have been partly emancipated only in our own time. It is the applied science of the past hundred years that has made child labor needless and universal education possible, that has made the still existing semi-slavery of industry wanton and intolerable.

You call attention to the proposal made in England that the British and American Associations for the Advancement of Science unite to draft "a magna charta, a declaration of independence," proclaiming that freedom of research and of exchange of knowledge is essential, and add, "Will the American association heed the appeal of its British counterpart?" At its meeting in Boston in 1933 the American association adopted the following "Declaration of Intellectual Freedom":

> The American Association for the Advancement of Science feels grave concern over persistent and threatening inroads upon intellectual freedom which have been made in recent times in many parts of the world.
>
> Our existing liberties have been won through ages of struggle and at enormous cost. If these are lost or seriously impaired there can be no hope of continued progress in science, of justice in government, of international or domestic peace or even of lasting material well-being.
>
> We regard the suppression of independent thought and of its free expression as a major crime against civilization itself. Yet oppression of this sort has been inflicted upon investigators, scholars, teachers and professional men in many ways, whether by governmental action, administrative coercion, or extralegal violence.
>
> We feel it our duty to denounce all such actions as intolerable forms of tyranny. There can be no compromise on this issue, for even the commonwealth of learning can not endure "half slave and half free." By our life and training as scientists and by our heritage as Americans we must stand for freedom.

J. MCKEEN CATTELL, *in the New York Times*

SCIENTIFIC BOOKS

ASTRONOMY

Text-Book on Spherical Astronomy. By W. M. SMART. Published January 5, 1937, in Cambridge: At The University Press, in New York: by the Macmillan Company. $5.50.

A HUNDRED years ago the only physical character-