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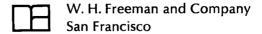
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A SERIES OF BOOKS IN PSYCHOLOGY

Editors: Richard C. Atkinson Jonathan Freedman Gardner Lindzey Richard F. Thompson

It is important to note at the outset that this book is incompletely described by its title. Inclusion in the title of all the appropriate qualifications and elaborations would not only have horrified our publisher but would have presented the book designer with an almost impossible task in fitting the title onto the cover. As the reader will discover, the "race differences" we discuss are largely differences between various racial-ethnic groups in the United States, and "intelligence" mostly refers to performance on conventional intelligence tests. Furthermore, our discussion of this topic is chiefly focused on the question of the relative influences of the genes and the environment on such differences, and on some of the social implications of different answers to this question. We have, however, included in appendices some material that extends the discussion beyond the limited focus of the text.

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the project if suitable collaborators could be located. He and Spuhler had previously collaborated on an essay on racial differences in behavior, and Spuhler's background in physical anthropology and human biology provided essential additional competence. Loehlin and Lindzey had been colleagues at the University of Texas for a number of years, and although both were psychologists interested in behavior genetics, their backgrounds were distinctively different, with Loehlin possessing quantitative skills very much needed for the proposed study. It was finally agreed that the project would be undertaken under the auspices of SSRC's Committee on Biological Bases of Social Behavior with the primary participation of Spuhler, Loehlin, and Lindzev, assuming that adequate funding could be found to provide the three authors with some released time from academic responsibilities. Given this plan, the Center for Advanced Study in the Behavioral Sciences generously extended an invitation to the three participants to spend the 1971-72 academic year at the Center.

At this point, Henry W. Riecken (who was then President of the Social Science Research Council) and Lindzey set out upon a search for project funds that, rather to their surprise (given the manifest current interest in the problem and the frequent professions of the need for an objective analysis of the relevant data), proved to be quite elusive. There seemed to be little or no interest in the proposal on the part of federal agencies (not altogether surprising) or private foundations (somewhat more surprising). Some even suggested they would only be interested if we were willing to specify in advance just what the conclusions of the study would be! The one exception to this rather dreary set of interactions was the U.S. Office of Child Development and, specifically, Professor Edward F. Zigler of Yale University. who was then Director of the Office. He was consistently encouraging, and his agency eventually provided major support for the project. Additional financial aid was provided by the University of Texas, and by the National Science Foundation, through its support of the Project on Science, Technology and Society that was administered by the Center for Advanced Study in the Behavioral Sciences.

During the year at the Center our first step was to arrange for an Advisory Board that included representatives of relevant scientific specialties, representatives of the minority groups covered by the study, and persons who were familiar with public policy decisions and the role that scientific data might play in such decisions. This Board consisted of Anne Anastasi, Judge David L. Bazelon, William

general seminars early in the year in which we discussed key issues with our interdisciplinary colleagues, and later a number of smaller meetings and informal discussions with Fellows who were particularly interested in one aspect or another of the project. This provided a valuable opportunity for interacting with highly trained scholars whose disciplines ranged from the humanities to the biophysical sciences, although the majority were from the behavioral sciences. Among the Fellows we are particularly indebted to for helpful discussions concerning the project were Lee Cronbach, David Danelski, Nathan Glazer, Robert Hodge, George Lakoff, Joshua Lederberg, Robert LeVine, Robert Nozick, Henry W. Riecken, and David Wiley. We are particularly grateful to O. Meredith Wilson and his staff at the Center for having provided advice as well as a remarkably attractive and stimulating setting for our work.

Finally, we sent the draft manuscript, in two installments, to some fifty additional colleagues in the biological and behavioral sciences, inviting their comments and criticisms. Quite a few responded with extended critiques and suggestions. Others commented more briefly on matters of special interest to them. In a few cases we were fortunate in being able to discuss the manuscript directly with these persons. Among those to whom we are particularly grateful for helpful suggestions are Joan and Stephen S. Baratz, Ned Block, Philip K. Bock, Jack Bresler, Jan Bruell, Luigi Cavalli-Sforza, Raymond B. Cattell, Bernard Davis, Ralph Mason Dreger, Otis D. Duncan, Hans J. Eysenck, Stanley M. Garn, Perry Gluckman, Irving I. Gottesman, Henry Harpending, Richard J. Herrnstein, Joseph Horn, Christopher Jencks, David Jenness, Arthur R. Jensen, Ashley Montagu, R. Travis Osborne, T. Edward Reed, Sherman Ross, H. Eldon Sutton, William Shockley, Steven G. Vandenberg, and Lee Willerman.

In identifying these various distinguished scientists and scholars, we do not, of course, mean to imply or suggest their endorsement of this book. We sent them a draft—in which all of them found at least some room for improvement. Their suggestions were of help to us in putting the draft into its final form. We do want to acknowledge that assistance, plus the encouragement that many of them provided us, but we do not wish to have them saddled with any of our views that they do not share.

In short, we wish to be quite explicit concerning the responsibility for what is contained in this volume. The statements and conclusions in the book have benefited from the wise advice and support of many xii Preface

individuals and agencies, but we, the authors, are solely responsible for what is said.

We are grateful to Noel Dunivant, Jr., for his conscientious help in checking references.

The royalties from this book have been assigned to the University of Texas, the University of New Mexico, and the Center for Advanced Study in the Behavioral Sciences, to provide financial assistance for minority-group students and scholars.

December 1974

John C. Loehlin Gardner Lindzey J. N. Spuhler

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One might well wonder why any behavioral scientist of good sense would willingly, or even reluctantly, become involved in the tangled morass of data, methods, ideologies, and emotions that currently surrounds the question of the relative importance of genetic and environmental variations in accounting for racial-ethnic IQ differences. In this case, it was not one behavioral scientist but three, all of whom generally consider themselves rational. Partly in defense of our reasonableness, but primarily to keep the historical record complete, we think it appropriate to recount some of the events that led us to embark on this project, as well as to outline the manner in which we attempted to carry it out.

In an important sense, this book may be considered a lineal descendant of Robert Sessions Woodworth's 1941 monograph Heredity and Environment: A Critical Survey of Recently Published Material on Twins and Foster Children. Not only were both books prepared under the auspices of the Social Science Research Council, but both deal with heredity and environment in relation to intellectual performance. However, this book had its own particular history. At the time this project was conceived, the National Academy of Sciences was finding the topic of race differences a rather slippery one and had rejected a recommendation from one of its own committees that some sort of review of the subject be prepared. A member of that committee, Ernest R. Hilgard, discussed with O. Meredith Wilson the possibility of the Center for Advanced Study in the Behavioral Sciences serving as the host for a small group of invited scientists who would do the task that the Academy had declined. The plan was eventually proposed to one of us (Lindzey) who was active in the affairs of the Social Science Research Council. The question was subsequently brought before the Committee on Problems and Policy of SSRC, where the general importance of a factual and objective survey of existing evidence bearing on the issue was agreed on, and a decision made to refer the matter to the Committee on Biological Bases of Behavior, as the existing SSRC committee that was best qualified to make further recommendations. Lindzey was currently a member of this committee and both he and Spuhler had served on an earlier version of the committee, known as the Committee on Genetics and Behavior.

The Committee on Biological Bases of Behavior agreed that the project was worthwhile and should be pursued if appropriate scholars could be found to prepare the report. Lindzey had planned to take a leave of absence the following year and he agreed to participate in

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Bevan, Marvin Bressler, James E. Cheek, Kenneth B. Clark, Carleton S. Coon, James F. Crow, Theodosius Dobzhansky, Richard A. Goldsby, Roger W. Heyns, Ernest R. Hilgard, C. C. Li, Alfonso Ortiz, Manuel Ramirez III, Curt Stern, Charles W. Thomas, John W. Tukey, Sherwood L. Washburn, and Dael Wolfle.

The members of the Advisory Board were informed of our general plan for the monograph, its outline, and the steps we planned to take in preparing it, and were invited to respond to this information in any manner they chose: later, they were sent the draft manuscript for their comments and criticism. We are deeply grateful to all the members of the Board for their support and cooperation and we would like to express particular gratitude to Professors Anastasi, Bevan, Crow, Dobzhansky, Hilgard, Ramirez, Stern, Tukey, and Wolfle whose detailed and specific comments on the manuscript were extremely helpful to us in arriving at a final version.

In addition to arranging for the Advisory Board, we were especially fortunate, early in our planning and study, in being able to meet personally and consult with a number of social scientists who in addition to their professional and academic credentials possessed the unique perspective gained from being members of U.S. minorities. These consultants included Edward J. Casavantes, then with the United States Commission on Civil Rights and now at California State University, Sacramento; William Haves and William D. Pierce, West Side Mental Health Center, San Francisco; Frank L. Morris, the Russell Sage Foundation; Walter L. Wallace, Princeton University; and Robert L. Williams, Washington University. In recognizing here their helpful contributions to our own education, we do not, of course, mean to imply an endorsement on their part of either our project or its final product, this book. With each of these individuals we discussed our general plans, the proposed chapter outline of the book, and various sources of data that might be important to consider. We also reviewed a list of what we considered to be major issues in the area and even discussed whether the project should be pursued further at all—our consultants, like potential funding sources, were by no means of one mind on this question. Each of the consultants was also later sent a draft of the manuscript and invited to make suggestions for revision.

Not only were we aided by a Board of Advisors and a series of consultants but we also attempted to capitalize on the unusual and diverse talents of our fellow Fellows at the Center. There were some

### ISSUES AND CONCEPTS

# The Problem and Its Context

It may be that while specialists in the physical and natural sciences have been embroiled in debates over arms control, atomic energy, atmospheric and water pollution, supersonic transportation, and organ transplants, social scientists have had less than their share of the problems associated with the intersection of science, technology, and public policy. If so, this disparity is fast being removed by the recent eruption of scientific and public concern about individual and group differences in intelligence, their determinants, and the implications of all of this for social and political decisions. Questions concerning the meaningfulness and predictive utility of any estimates of general intelligence, the stability of such estimates, and the relative contributions of genetic and environmental factors to intelligence have remained among the most difficult and emotionally charged issues within the social sciences for more than five decades. When these questions are reexamined in the context of racial and social class

differences in a society ridden with unresolved tensions in these areas, it is not surprising that the result should be a massive polemic in which personal conviction and emotional commitment often have been more prominent than evidence or careful reasoning.

The goal of this book is to provide a sober, balanced, and scholarly examination of the evidence that bears upon the role of genetic and environmental factors in the determination of group differences in ability in the United States. Although the focus of our effort will be upon the existing evidence that bears significantly upon this question, we will also be concerned with the policy implications, if any, that such evidence may have, and also with the extent to which further research in this area should be given priority, and what varieties of such research may be most promising in terms of providing significant and clear-cut evidence.

#### THE GENERAL QUESTION

There is no issue in the history of the social sciences that has proved to be quite so persistently intrusive as the question of assessing the relative importance of biological and environmental determinants of behavior. Indeed, an interest in the contribution of what is given as opposed to what is learned far predates the emergence of the biological and social sciences. The modern versions of the question began to emerge following the formulations of Galton and Darwin in the nineteenth century and became more sophisticated early in the twentieth, after the development of the discipline of genetics from Mendel's discoveries and the appearance of a variety of techniques for measuring aspects of behavior quantitatively.

The initial presentations of the major ideas of Darwin, Galton, and Mendel occurred in the span of a few years even though it was to be many decades before all of these ideas were brought together and integrated. Darwin's Origin of Species, in which he developed his theory of evolution and particularly his view of the importance of natural selection, was published in 1859. His emphasis upon the continuous and orderly development of new forms of life from other forms and the decisive role played by fitness, or reproductive advantage, was from the beginning linked to behavioral as well as physical attributes and thus directly relevant to social scientists. Galton's concern with the importance of inheritance in determining high levels of achievement was clearly influenced by the ideas of his cousin