This report describes and evaluates a residential postdoctoral program in educational research at the Center for Advanced Study in the Behavioral Sciences at Stanford University. Activities normally engaged in by the fellows in this program include the following: (1) Reading, study, and reflection; (2) analysis of data, writing, and rewriting; (3) participation in formal or informal learning activities; (4) participation in seminars or work-groups; and (5) intensive collaboration with one or more other fellows. Evaluation is provided by memoranda written at the conclusion of their fellowships by the two fellows supported at the center by this program from July 1, 1967 to August 31, 1968. Both participants stressed the advantages of free time and the intellectual stimulation of other fellows at the center. Included is a list of all the fellows at the center for 1967-68 with notes concerning the interests that each of them pursued during the year. (MF)
FINAL REPORT
Project No. 7-1161
Grant No. OEG-1-7-071151-4590

POSTDOCTORAL FELLOWSHIP PROGRAM IN
EDUCATIONAL RESEARCH

November 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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REPORT OF POSTDOCTORAL FELLOWSHIP PROGRAM IN EDUCATIONAL RESEARCH
CENTER FOR ADVANCED STUDY IN THE BEHAVIORAL SCIENCES

Project No. 7-1161
Grant No. OEG-1-7-071161-4590

Preston S. Cutler
November 15, 1968

The research reported herein was performed pursuant to a grant with
the Office of Education, U. S. Department of Health, Education, and
Welfare. Contractors undertaking such projects under Government
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Education position or policy.

Center for Advanced Study in the Behavioral Sciences
202 Junipero Serra Boulevard
Stanford, California 94305
Introduction

The Center for Advanced Study in the Behavioral Sciences conducts a residential postdoctoral program for scientists and scholars from this country and abroad who show promise or accomplishment as productive workers in their respective fields. Fellowships have been awarded in the following fields (in order of decreasing numerical representation): psychology, anthropology, sociology, political science, history, economics, philosophy, psychiatry-psychoanalysis, literature, law, education, linguistics, certain specialties in biology, certain mathematical and statistical specialties, and certain areas of application.

Description of the Program

The method of the postdoctoral fellowship program in educational research as such is to enable Fellows under this program to participate as Fellows at the Center, thus bringing them into contact with behavioral scientists in an environment conducive to free exchange of ideas. Each Fellow is both a teacher and a learner. The Center is not organized to facilitate the collection or production of new data. Activities normally engaged in by the Fellows include the following:

1. Reading, study, and reflection.
2. Analysis of data, writing, and rewriting.
3. Participation in formal or informal learning activities.
4. Participation in seminars or work-groups.
5. Intensive collaboration with one or more other Fellows.

Evaluation of the Program

Evaluation can be appropriately provided by quoting memoranda written upon conclusion of their fellowships by the two Fellows supported at the Center by Project No. 7-1161.

Frederick G. Brown, Professor of Psychology and Vice President for Student Affairs at Iowa State University, evaluated his fellowship as follows:

"1. Opportunities. Compared to the opportunities available to me in 1966-67, a major advantage presented by the Center was time--time to read, to reread, to think, to discuss issues with other Fellows, to write; time to spend on my own intellectual interests. Although many of the Fellows remarked on the delights of unencumbered time, the change was particularly noticeable to me as I came to the Center from a service rather than a teaching job. Part of the additional time resulted from being away from one's home base and its consequent responsibilities (e.g., committees, advising). But a significant part was due to the Center staff's efficiency in handling the library, clerical, duplication, data processing, and related details--thus freeing me for other activities. The other major advantage provided by the Center was the opportunity to meet
and interact with Fellows in Psychology and related areas, the large majority of whom I had not previously known. Here, again, the setting and the lack of time pressures were conducive to unhurried, and thus more productive interaction.

"To compare the year at the Center to what might have been (if on leave with pay) is harder. I cannot conceive of spending a year in a more stimulating and beautiful physical setting; nor can I conceive of my clerical and data processing needs being handled more efficiently elsewhere. But perhaps the greatest difference between a year at the Center and a year on leave was the breadth of experiences provided. On my own, I probably would have continued research and writing in the areas in which I had been working and would have sought out people with interests in these areas. At the Center, I encountered persons who I otherwise probably never would have met and, through discussions with them was exposed to ideas, approaches and literature that previously were unknown to me. These contacts changed some of my present ideas and research plans; however, I expect that they will have even a greater impact on the future development of my academic career.

"2. Tangible results. Interpreting 'tangible results' to mean writing and publications, I accomplished the following during the year: (a) Essentially completed (all but about 10 percent) a book on the logic and applications of psychological testing, which will be published in spring, 1969 by Holt, Rinehart & Winston. (b) Planned, signed a contract for, and started writing a short book on the measurement of classroom achievement. About 25 percent of the work on the book will have been done at the Center. (c) Outlined two other books that I hope to complete within the next 3-5 years--one on the role of measurement in education, the other a critical examination of the concept of validity in psychological testing. (d) For several reasons, I did not spend much time on research data but did complete two studies: one for the Big Eight Athletic Conference and another on the scaling of high school grades; bits and pieces of time were spent on several other, yet uncompleted, research projects. (e) Wrote a paper for presentation at the 1967 American Psychological Association convention on 'Communicating test results' and presented a paper at Berkeley on 'Alternative approaches to the validity of psychological tests.'

"3. Discussion groups. Participated in two of the formal seminars --the Causal Inference Seminar and the Higher Education Seminar. Also took David Peizer's 'course' on Multivariate Analysis. Other participation was on an ad hoc basis--e.g., attending seminars when the topic was of interest, having informal discussions when a particular immediate problem arose.

"4. Contacts with other Fellows. My primary contacts on matters relating to my reading, research and writing were with Sandy Astin,
Merle Wittrock, Eli Rubinstein and Ira Steinberg. To a lesser extent I had contacts with Jan Smedslund, Harry Jerison, Harry Broudy, Hunter Dupree and, of course, those Fellows who participated in the same seminars that I did (Causal Inference, Higher Education). It's difficult to say who most influenced me. Certainly Sandy Astin, but, as I knew him and his work previously, it's difficult to assess the exact degree of influence. Merle Wittrock and Jan Smedslund influenced my thinking about Psychology and I was also strongly influenced by some of the philosophers--Ira Steinberg, Rod Firth, Harry Broudy, Bob Sleigh and Maury Mandelbaum, particularly. (And, of course, by the Director.) I'd hesitate to say that I influenced anyone. Probably my main contribution was reacting to some of the writings and ideas of Merle Wittrock and Sandy Astin. From my viewpoint, the direction of influence was optimal, as in coming to the Center, I hoped to learn from the other Fellows rather than try to spread my own gospel; from the viewpoint of the Center, my contribution may have been less than optimal.

5. Changes in skills and attitudes. During the year I increased my knowledge of multivariate statistics, mainly through David Peizer's course; learned of several new approaches to data analysis in the Causal Inference seminar; and did some reading in philosophy of science and epistemology. At the beginning of the year my interests were about equally divided between psychological testing and higher education. Although early in the year I spent more time on higher education problems, as the year progressed I devoted more time to psychological testing and will probably continue to make this my main interest for the next 5 years. Shifts in attitude and perspective are harder to pinpoint. Reflecting on the year I'd say that I changed by (a) planning to spend more of my time and energy on basic rather than applied research, (b) realizing, more than ever before, the difficulty in reconciling professional demands with pressing social problems and (c) perhaps paradoxically, becoming convinced that my main interest in Psychology is in attempting to integrate and critically evaluate the data of particular problems rather than conducting original research or becoming involved in social action programs.

6. Possible consequences. This question is, of course, hard to answer at this time. As mentioned in the previous question, the year did reinforce some ideas about the future direction of my career. At a more tangible level the year at the Center has not, as yet, resulted in a change in jobs, a shift in responsibilities on my present job, any tangible recognition by my home institution, nor any formal or informal consulting or advising positions. I do, however, anticipate sending some of my students to work with some of the Fellows that I met this year.

7. Improvements. Any suggestions for improvements would be based on complaints so minor in comparison with the advantages provided by the Center that they are hardly worth noting. But to keep from submitting a blank paper, I'll mention three points.
(a) If starting over, I would arrange to work directly with one typist throughout the year. Much of my work was sent out to various typists. Thus I had no contact with my typists and, as there was little consistency in their work, I was delayed somewhat. (b) Much of the social program was arranged so that people who did not have live-in baby sitters had difficulty attending. This probably was a greater problem for my wife than for me. (c) Perhaps the biggest disappointment of the year was in an area only tangentially related to the program of the Center. I had hoped to visit a number of individuals, departments and institutions on the west coast during my year at the Center. Although I tried to arrange these meetings well in advance and at the convenience of the persons I was visiting, the receptions I encountered, with a few exceptions, ranged from indifference to outright hostility. After several experiences of this nature, I abandoned many of my previous plans for visits to California colleges and universities.

"Summary. If I had to summarize the effect of the year in a few sentences, it would be thus: After ten years working as an applied service-oriented Psychologist, the year at the Center offered me an opportunity to play the role of a scholar. I found that I preferred the scholarly life to the applied role. Now my task is to implement the changes necessary so that I can adopt this new role."

Ira S. Steinberg, Assistant Professor of Education, Oberlin College, evaluated his fellowship briefly as follows:

"I came to the Center with the intention of reacquainting myself with several basic sources in the literature of the various behavioral science disciplines. I am, and have been, in the midst of gathering my thoughts and organizing materials in preparation for writing a book on the philosophy of the social sciences with particular emphasis on the problem of general theory. I thought there could be no better place for the sort of reading and study that I had in mind, especially as it would afford an unparalleled opportunity for discussion of these readings with social scientists of varying interests and disciplinary persuasions.

"I am happy to say that my expectations were both disappointed in a sense and exceeded in the main. Opportunities for discussion were excellent. Various fellows provided suggestions for reading and study of materials of which I would have been ignorant if left to my own devices. The seminars on the problems of causal analysis, history and development of social science, and systems gave me insights into recent and contemporary developments in the behavioral sciences as well as the difficulties in various theoretic and methodological approaches to behavioral scientific research, as perceived by those involved in their development. As a result of such discussion, I concluded that my original plans had been naive, as I strove to keep
up with the ideas and suggestions I was receiving. I did not read much of what I expected to read, but I read much that will make my writing more reflective of what is interesting and promising in contemporary social science than it would have been. I did not develop the detailed outline of a book, as I had expected, but instead have a much more sophisticated conception of what might be included in such a detailed outline than I would otherwise have had. At least I have a fairly good plan of study and writing that will keep me busy for the next few years.

"There is no doubt in my mind that this year at the Center will turn out to have made a significant impact on the direction and quality of my future work, an impact that could not have been made except in such an atmosphere organized in such a way as to make interdisciplinary communication among those concerned with and for the behavioral sciences arise naturally and spontaneously."

Appendix

To indicate the full range of contact in the intellectual community that made up the fellowship roster at the Center for 1967-68, a list of all the Fellows with notes concerning the interests each of them pursued during the course of the year is appended.

Program Reports

1. Publicity--This program received no publicity treatment from the Center. We understand that the Center was identified as one place where successful candidates for USOE Postdoctoral Fellowship candidates might elect to spend their fellowships.

2. Application Summary--The Center reserved two places on its roster in the expectation that two successful candidates would wish to be accepted here. About a dozen different individuals inquired in a way that identified them as USOE Postdoctoral Fellowship applicants.

3. Trainee Summary--Two trainees, both at the college or university level, were accepted and completed the full fellowship term.

4. Program Director's Attendance--The Project Director was in continuous attendance throughout the full fellowship term from July 1, 1967 to August 31, 1968, but was in only intermittent contact with the trainees. For the trainees the facilities and advantages of the training program were continuously available.
5. **Financial Summary**

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*Form 6019 is also submitted herewith.*
CENTER FOR ADVANCED STUDY IN THE BEHAVIORAL SCIENCES
202 Junipero Serra Boulevard, Stanford, California

SUMMARY OF INTERESTS 1967-68

M. H. Abrams, Frederic J. Whiton Professor of English, Cornell University
The French Revolution and the literary imagination; application of psychology to literary problems; history of aesthetics; theory of language.

Mary D. Salter Ainsworth, Professor of Psychology, Johns Hopkins University
Development of attachment of infant to mother; development during first year of life; ethology and comparative psychology; psychoanalytic theory and studies; control systems theory and related neurophysiological models.

Hayward R. Alker, Jr., Associate Professor of Political Science, Yale University
Mathematical theories of political process; social science research methods (simulation, content analysis, survey research).

Alexander W. Astin, Director of Research, American Council on Education
Career choice and development; social deviation; longitudinal evaluative studies in educational decision-making; measurement and taxonomy of educational environments; undergraduate college environments and student behavior; behavioral scientists and research in education.

Hans Baron, Professorial Lecturer in Renaissance Studies, University of Chicago, and Research Fellow, Newberry Library
Political thought in the Italian city-state republics; collected papers on Florentine Civic Humanism.

Leonard Binder, Professor of Political Science, University of Chicago
Comparative analysis; national integration and political development in the Middle East; theory of political development.

Morton W. Bloomfield, Professor of English, Harvard University
Literary use of language; anthropology in the study of literature; literary criticism and philological method.

Philip B. Bradley, Professor of Neuropharmacology and Head of Department of Experimental Neuropharmacology, University of Birmingham
Drugs and the central nervous system; psychological, neurophysiological, and biochemical methods in neuropharmacology.

Richard A. Brody, Associate Professor of Political Science, Stanford University
Factors affecting policy and decision-making in international politics; American foreign policy.

Harry S. Broudy, Professor of Philosophy of Education, University of Illinois
Professional training of teachers; uses of knowledge; aesthetic education.

Frederick G. Brown, Associate Professor of Psychology, Iowa State University (Ames)
The impact of the university on the student; psychological measurement; philosophic bases of psychological research.

Bernard S. Cohn, Professor of South Asian History and Anthropology, University of Chicago
Social anthropology of India; British rule in India; history of social and cultural anthropology; Anglo-American family and kinship in the nineteenth century.

Elizabeth Colson, Professor of Anthropology, University of California
Impact of economic and political change upon rural communities; assimilation and ethnic boundaries; methods of social control in non-centralized societies; new religious movements; urban anthropology.
A. Richard Diebold, Jr., Acting Associate Professor of Anthropology and Linguistics, Stanford University
General psycholinguistics; comparative psychology of communicative behavior; grammatical theory; sociolinguistics; psychobiological bases of verbal and non-verbal behavior; and language-mediated cognitive behaviors.

A. Hunter Dupree, Professor of History, University of California
American history; history of science and technology in America; relation of science and government; history of biology; history of evolutionary ideas; history of higher education; science and religion.

Robert Eisner, Professor and Chairman, Department of Economics, Northwestern University
Empirical econometrics, particularly relating to investment, and to the theory of income, employment and growth.

Frederick E. Emery, Senior Social Scientist, Human Resources Centre, Tavistock Institute of Human Relations, London
Design of socio-technical systems; processes of communication and persuasion; interrelation of personality, culture, and the use of the common drugs in the management of affects.

Roderick Firth, Professor of Philosophy, Harvard University
Epistemology and moral philosophy; implications of recent developments in theory of language, psychology of perception, and philosophy of science for the role of perception in relation to scientific knowledge.

Meyer Fortes, William Wyse Professor of Social Anthropology, University of Cambridge
Kinship and social structure; interrelations between linguistic and psychoanalytic theory and the analysis of primitive religious institutions.

Charles Frake, Associate Professor of Anthropology, Stanford University
Linguistic anthropology; ethnographic methods; social structure; cultural ecology; Philippine linguistics and ethnology.

David H. French, Professor of Anthropology, Reed College
Western U. S. Indians; traditional French culture; social structure; ethnobotany; sociolinguistics; ecology; history of anthropology; Asian and Pacific ethnography.

Max Gluckman, Professor of Social Anthropology, University of Manchester
African and tribal law, in the light of comparative jurisprudence; the morphology and development of political structures, from tribal systems to modern systems.

Mary R. Haas, Professor of Linguistics and Coordinator, Survey of California and Other Indian Languages, University of California
Grammatical study of American Indian language; comparative linguistics of the Algonkian, Muskogean and Hoxan stocks; history of American Indian linguistics.

David A. Hamburg, Professor of Psychiatry, Stanford University School of Medicine
Relevance of genetics and evolution to human behavior, particularly in stress; developmental aspects of coping behavior under stress.

J. Ulf I. Himmelstrand, Professor of Sociology, University of Uppsala
Social pressures, attitudes, and democratic processes; comparative political studies.

Hajime Ikehuchi, Professor of Social Psychology, Institute of Journalism, University of Tokyo
Psychology of political attitudes; public opinions and communication; comparative political studies.
Harry J. Jerison, Professor of Psychology and Director, Behavior Research Laboratory, Antioch College
Evolution of brain and behavior; signal detection, attention, and vigilance.

Sanford H. Kadish, Professor of Law, University of California
Legality and morality and justifications for rule departures; uses and limits of criminal law and punishment; history of American ideologies concerning the criminal law.

Olaf F. Larson, Professor of Rural Sociology, Cornell University
Rural social systems and change; longitudinal study of small communities; group-level variables in the development process; sociological aspects of public policy in agriculture.

T. P. R. Laslett, Reader in Politics and the History of Social Structure, Cambridge University. Fellow of Trinity College
The conjugal family in Western Europe; revolutions; the contemporary university.

I. Michael Lerner, Professor of Genetics, University of California
Selection theory; ecological and behavior genetics; social impact of evolutionary thought and modern genetics.

Robert J. Levy, Professor of Law, University of Minnesota
Divorce Law and Administration; divorce counseling; family functioning and the juvenile court interventions; social welfare legislation.

Donald G. MacRae, Professor of Sociology, University of London
Interests in most sociological fields; historical development of sociology and social anthropology; social taxonomy; the role of advertising; social development in Ghana; minority groups in Britain.

Maurice Mandelbaum, Professor of Philosophy, The Johns Hopkins University
Philosophy of history and of the social sciences; ethics; history of modern philosophy; nineteenth century thought with special reference to the social sciences.

Clarence Morris, Professor of Law, University of Pennsylvania
Law of courts; legal philosophy, Chinese law, both ancient and contemporary.

Hugh Douglas Price, Associate Professor of Political Science, Harvard University
Quantitative methods; political development and modernization in the U.S.; politics of the South.

Eli A. Rubinstein, Director, Division of Manpower and Training Program, National Institute of Mental Health
Mental health manpower development; improvement of science administrators and science administration.

Melvin Sabshin, M.D., Professor of Psychiatry and Head of the Department, University of Illinois College of Medicine
Social psychiatry; "normal" modes of adaptation; ideologies in the mental health profession.

David L. Sills, Adjunct Research Associate, Bureau of Applied Social Research, Columbia University; Editor, International Encyclopedia of the Social Sciences
Sociology generally; contemporary study of voluntary associations.

Robert C. Sleigh, Jr., Associate Professor of Philosophy, Wayne State University
Philosophy of mind; knowledge of the external world and of other minds; intentionality and epistemic logic.
Summary of Interests--1967-68

Jan Smedslund, Professor of Psychology, University of Oslo
Cognitive development in children; thinking and communication; description of psychological processes; general psychological theory.

Thomas C. Smith, Professor of Japanese History, Stanford University
Pre-modern economic development; agriculture in modern economic development; historical demography.

Ira S. Steinberg, Assistant Professor of Education, Oberlin College
Social and political philosophy; philosophy of the social sciences; education.

Harold W. Stevenson, Director, Institute of Child Development, University of Minnesota
Children's learning; children's social behavior.

Philip T. Stone, Social Psychologist, Harvard University
Attitude and image structures in the brain; environmental determinants of behavior; attitude change; emotions and tension management; long-term group dynamics; Icarian imagery; design of social systems; concept learning; artificial intelligence; psycho- and socio-linguistics.

Jar. Szczepanski, Professor of Sociology, University of Warsaw
Class structure in Polish society; the Polish intelligentsia; industrial sociology.

William Vickrey, Professor of Economics, Columbia University
Public finance; game theory; welfare economics.

Gregory Vlastos, Stuart Professor of Philosophy, Princeton University
Ethics and political philosophy; mysticism and logic in Greek philosophy; Plato's moral and political philosophy.

Richard A. Watson, Associate Professor, Department of Philosophy, Washington University, St. Louis, Missouri
Theories of perception in physiology, psychology, and philosophy; relation of man to physical environment; anthropological theory; epistemology; history of modern philosophy.

Merlin C. Wittrock, Professor of Educational Psychology and Director of the Center for the Study of Evaluation of Instructional Programs, University of California, Los Angeles
Experimental study of instruction and human learning, especially transfer of learning, concept learning, rule learning, and problem solving of children.