

**ANNUAL REPORT  
1985-1986**

**Harold L. Votey, Jr.  
Director**

**COMMUNITY AND ORGANIZATION RESEARCH INSTITUTE**

**University of California, Santa Barbara**

**December 1986**

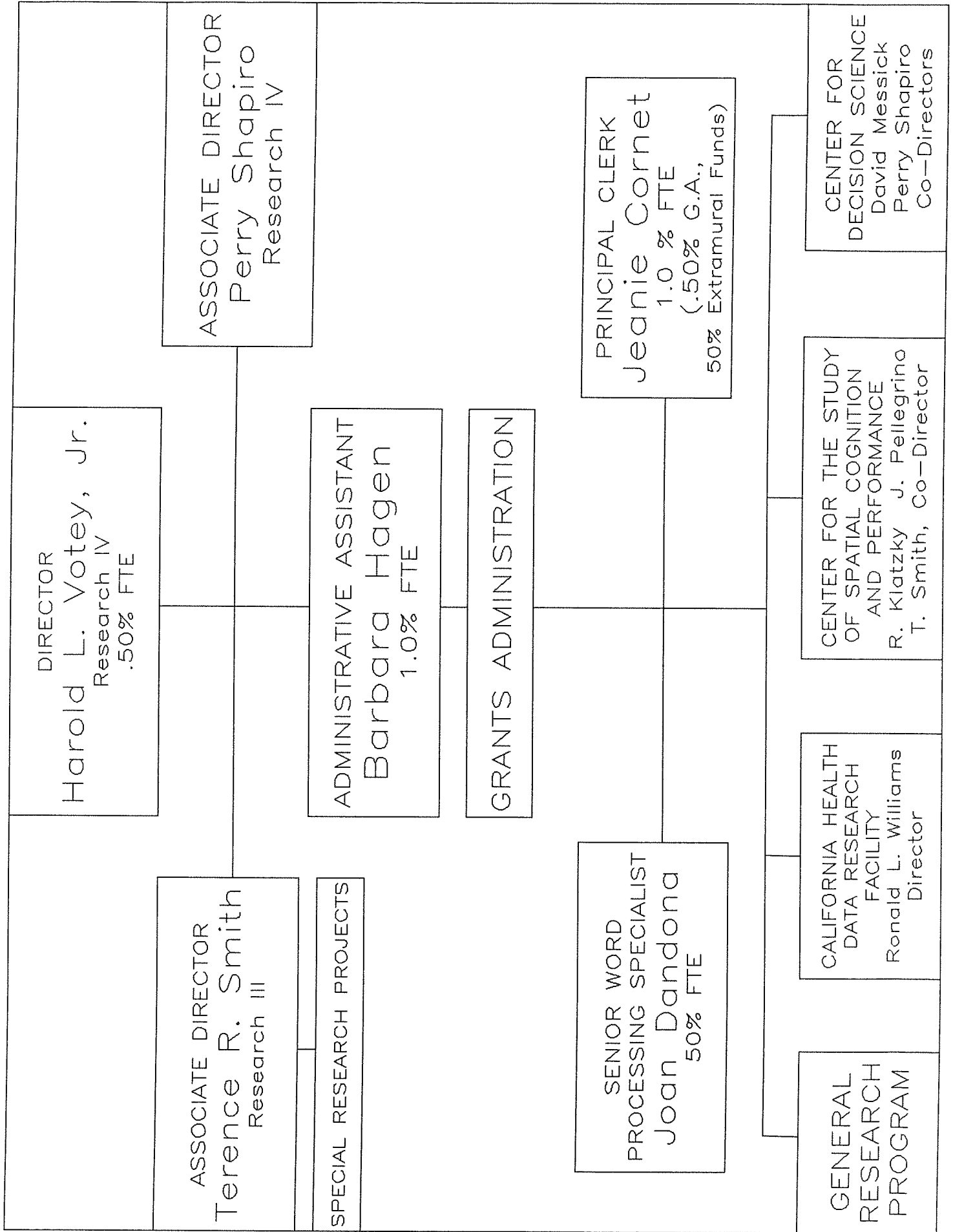
## COMMUNITY AND ORGANIZATION RESEARCH INSTITUTE

### Staff

Harold L. Votey, Jr., Director  
Perry Shapiro, Associate Director  
Terence R. Smith, Associate Director  
Barbara Hagen, Administrative Assistant through June 30, 1986  
Jeanie Cornet, Principal Clerk; (Administrative Assistant, effective July 1, 1986)  
Joan Dandona, Senior Word Processing Specialist  
Bee Hanson, Senior Word Processing Specialist

### Advisory Committee

Thomas Cooley, Chairperson (Economics)  
James Cronshaw (Biological Sciences)  
David Messick (Psychology)  
James Pellegrino (Graduate School of Education)  
Carroll Pursell (History)  
Joseph Lowery, Graduate Student Representative (Economics)



**TABLE OF CONTENTS**

CORI ORGANIZATIONAL CHART	iii
THE DIRECTOR'S STATEMENT	1
RESEARCH IN PROGRESS	8
OTHER ACADEMIC ACTIVITIES	12
PUBLICATIONS	16
PAPERS COMPLETED, SUBMITTED OR IN-PROGRESS	22
PAPERS PRESENTED, SEMINARS AND COLLOQUIA	24
PUBLIC AND PROFESSIONAL SERVICE ACTIVITIES	27
BREAKTHROUGHS IN RESEARCH	30
EXPENDITURES - EXTRAMURAL	31
EXPENDITURES - INTRAMURAL	33
STATISTICAL SUMMARY	34
APPENDIX A	
A-1 EXTRAMURAL RESEARCH ACTIVITY	36
A-2 INTRAMURAL RESEARCH ACTIVITY	45
APPENDIX B-1	
B-1A UCSB ACADEMIC STAFF ENGAGED IN RESEARCH	46
B-1B PARTICIPATION FROM OTHER CAMPUSES, INSTITUTIONS, INDUSTRY AND THE COMMUNITY	47
APPENDIX B-2	
B-2A EMPLOYEES ON UNIVERSITY FUNDS	51
B-2B EMPLOYEES ON NON-UNIVERSITY FUNDS	52
APPENDIX B-3 CURRENT SPACE ASSIGNMENTS	55

## THE DIRECTOR'S STATEMENT

The 1985-86 fiscal year represents a new high for CORI in terms of extramural support. Grants awarded in the fiscal year total \$1,950,432. This represents a 73.3% increase over the funding reported for the previous fiscal year. This is a record for CORI both with respect to the total and the rate of increase over the previous year. Growth continues to be in the size of awards rather than in their numbers. The total number of awarded for 1985-86 is 25, six more than for the year previously.

### CORI'S SCOPE IN INTERDISCIPLINARY RESEARCH

From the outset, CORI has been charged to "serve as a major resource for basic research in the social sciences with faculty participation in interdisciplinary research." The charge is two-dimensional. CORI has, from its inception, worked to expand opportunities for clients to succeed in basic research. At the same time considerable effort continues to be expended to encourage interdisciplinary involvement. The latter is the more difficult task.

Table I indicates the time path of participation in funded research by faculty, students, and professional researchers. The trends inherent in the table are reflected in Figure 1 that depicts the path of annual grant awards and number of projects supported. These data confirm the long-term picture of a greater than 20% annual growth in extramurally supported research in CORI.

We in CORI felt that we can be justly pleased with such a growth record, but while this record reflects a continued support by CORI clients over the years, it must be recognized that most of the credit goes to the clients themselves. The ultimate key to success is to be able to field good proposals and this requires faculty and research staff who are capable researchers able to communicate their abilities to deal with challenging research questions.

The role of CORI's staff is to create an atmosphere in which the difficulties of proposal submission and grants administration are minimized. Further, we try to provide space and services that make the research itself progress more easily. Additionally, we must work continuously to bring our services to the attention of researchers with new ideas who haven't been making use of our services. And we need to get across to potential proposal writers the possibilities for enriching proposals and the ultimate research products by involving researchers from other disciplines so that important questions regarding the subject are not overlooked. CORI's success in becoming more of an interdisciplinary operations is illustrated in Table 2. While the table indicates the range of disciplines involved, it also reveals that, while a broad cross-section of disciplines is involved in research grants administered through CORI, only about 44% of the subjects for research are being investigated on an interdisciplinary basis. While this is a reasonably high proportion for university research in general, the numbers show that there remains a substantial proportion of activities that might be broadened by involving the perspectives of other disciplines.

That the average size of grants has been increasing substantially (and more rapidly than the rate of inflation) is a revelation that the perceived quality of the research proposals submitted through CORI has been improving. This reflects favorably on the very effective group of CORI clients who continue to channel their efforts through CORI.

### THE SCOPE OF CORI RESEARCH

The scope of CORI research has tended to expand over the years in terms of faculty and student participation, as indicated in Table 1. The breadth of present activities is illustrated in Table 2. The potential is broader still as one can see by perusing the scope of proposals submitted in Sections A-1 and A-2.

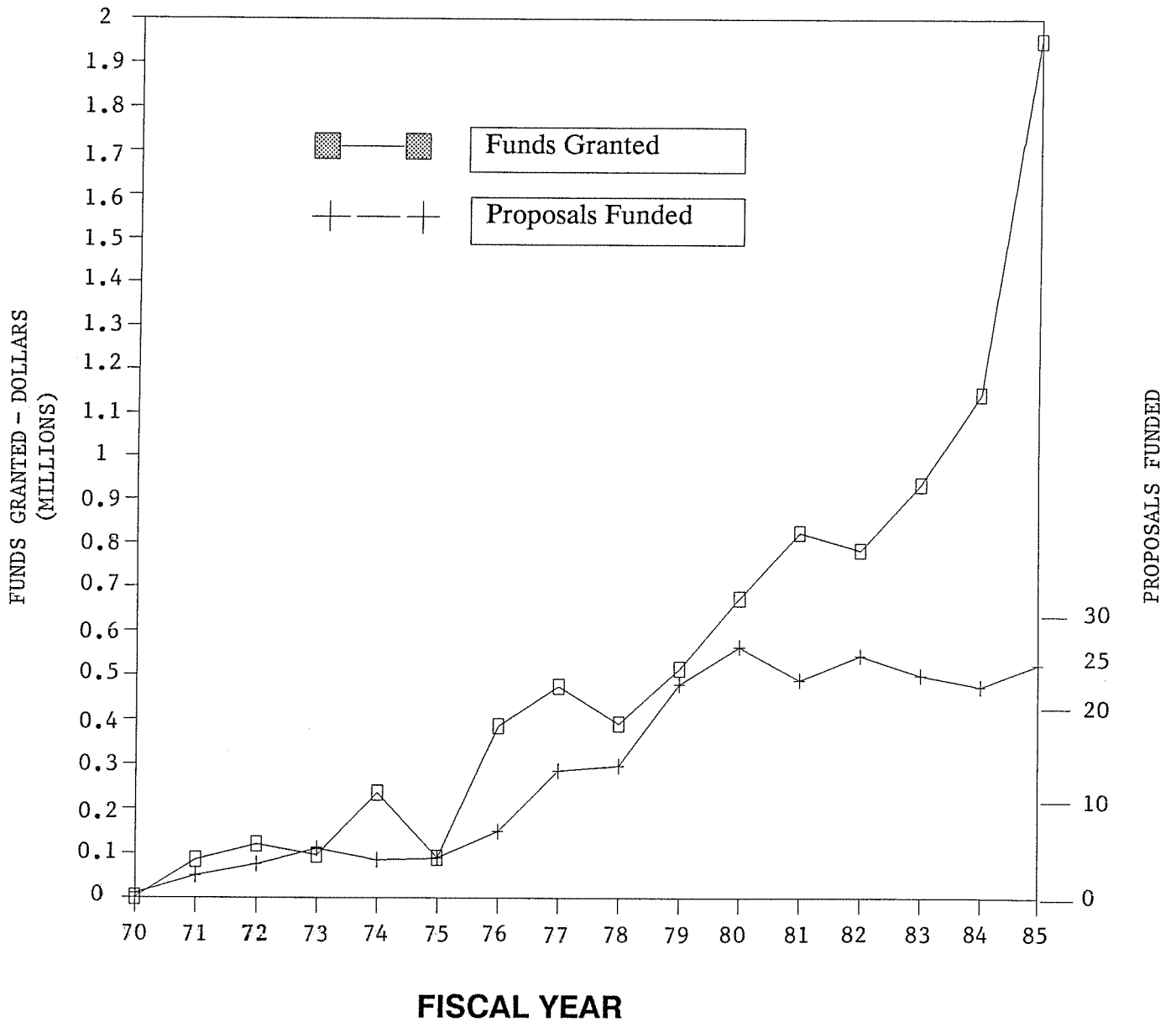
TABLE I

## Personnel Affiliated With CORI

	<u>80/81</u>	<u>81/82</u>	<u>82/83</u>	<u>83/84</u>	<u>84/85</u>	<u>85/86</u>
<b>A. <u>Extramural Funds</u></b>						
Faculty	14	32	36	33	26	20
Professional Researchers	3	6	5	3	3	1
Specialist	1	2	3	2	2	6
Postgraduate Researchers	9	10	2	8	5	6
Graduates	19	27	23	22	32	16
Undergraduates	9	8	6	15	9	10
Fellowships	7	4	4	7	6	1
<b>B. <u>University Funds</u></b>						
Administrative	3	5	5	3	4	4
Technical	2	2	1	1	13	11
Clerical	4	8	2	7	2	5
Professional					1	

# Figure 1. COMMUNITY AND ORGANIZATION RESEARCH INSTITUTE

## Historical Pattern of Funds Granted And Number of Successful Proposals \*



\* Not including intramural funds for special projects and programs.

Table 2

CORI Research Projects and Discipline Involved in 1985-86  
 (Discipline Involvement is defined on basis of personnel being based in or having formal training in discipline.)

	Bio-Science	Computer Science	Economics	Education	Envr. Studies	Geography	History	Law	Polit. Science	Psychology	Sociology
Artificial Intelligence						X				X	
Cognitive Science	X	X		X						X	
Child Health Data Base			X							X	
Crime Studies			X							X	
Crime Control Theory			X								
Data Base Management		X	X			X					
Decision Science			X							X	
Drunken Driving Behavior and Control			X								
Economic Theory Workshop			X								
Econometrics			X								
Expert Systems						X					
Energy Systems			X								
Geographic Information						X					
Health Economics	X		X								
Health Information Systems	X	X	X								
History Using Computer Technology as a Tool							X				
Mexican Economic Growth & Environmental Impacts			X								
Labor Markets			X								
Migration			X								
Mono Lake Bilogy	X		X		X						
Optimum Growth			X								
Phloem Transport	X										
Public Finance	X										
Public and Oral History							X				
Spatial Behavior and Knowledge				X		X				X	
Water Resource Use			X		X						
Work and Family											X



Such traditional areas of research as energy involve Walter Mead. George Borjas continues with research on labor migration and labor discrimination advances to new questions on a continually challenging topic. Llad Phillips and Harold Votey continue to investigate issues relating crime and labor market opportunities with a new kind of data and different estimation techniques than they have used in the past. Perry Shapiro along with Daniel Rubinfeld of the Boalt School of Law and Theodore Bergstrom of the University of Michigan make substantial progress and acquire new funding for their studies of demand for public goods. Ronald Williams remains one of the more successful clients in terms of continuity and magnitude of support for his work on the factors contributing to neonatal and perinatal survival and his more recent development of data systems for the collection of public health data on which such research may be based. The work of Warren Hollister on his computer data base from the Domesday Book and with the help of Robin Fleming, both in history, continues to be supported by funds from the UCSB Foundation.

Daniel Botkin continues on the project for the California Department of Fish and Game and the State Assembly. His focus is on the ecological systems relating to the Mono Lake Basin and the potential impacts of exporting water from that basin for municipal water supplies. Another new area of research is that by William and Denise Bielby studying men's and women's competing commitment to work and family.

The most active area within CORI in terms of funds grants over the past year has been cognitive science. Such work potentially involves learning, robotics, the ability to function in a spatial environment, and basic supportive research in a number of areas such as data base management, expert systems, and artificial intelligence. Thus far, proposals have been generated funding for computer scientists, faculty in education, geography, and psychology. Planned research will also likely link to work being conducted on campus in robotics and to such public health concerns as the development of aid to the blind for operating in complex spatial environments.

Both intramural and extramural funds have been acquired in this past academic year to promote the Center for the Study of Spatial Cognition and Performance that is the focal point for these broadly conceived research interests. Substantial support has come from the Academic Senate for computer hardware for conducting experiments in cognition. Campus funds have also provided for a LISP machine, a sophisticated computer to facilitate the development of computer software for the aspects of artificial intelligence important to a variety of the projects anticipated and getting underway. Faculty who have been directly involved with this development are Roberta Klatzky in Psychology, James Pellegrino in the Graduate School of Education, and Terence Smith in Geography and Computer Science. Sally Doherty, a post-doctoral student in psychology, is employed full-time on this research. Others involved in related research are Ralph Dubayah and Donna Peuquet in Geography. If proposals submitted and the initial responses of funding agencies are an indication, these activities promise to be the most productive in CORI in attracting extramural support. The long run expectation continues to be that cognitive studies will become an important academic program, initially at the graduate level, as well as a promising area of research.

Another new area for CORI that is not so fully developed as cognitive science, but that promises to be an important new area of activity for the campus is decision science. Activities directed by David Messick in Psychology and Perry Shapiro in Economics hold promise for the development of an academic program in an area that encompasses both their disciplines and will likely involve others as the program becomes established. The new program envisions both the development of theory and experimentation to broaden our understanding of decision processes and to train students in techniques for more effective management of decision making. A first step to gain national recognition in this area has been the conducting of a national conference.

## CORI SERVICES

Providing services to research clients continues to be the justification for CORI's existence. Most important is assistance in promptly getting out proposals to meet agency deadlines, often a seemingly prohibitive task with many hurdles that must be overcome by prospective researchers. CORI has yet to miss a deadline when there has been any reasonable hope of completing word processing, budgets, and the acquisition of required approvals for submission because we realize the efficient proposal submission is the necessary first condition for any researcher to be a successful CORI client. This work has been supervised by Barbara Hagen, providing help on budget submission requirements and all aspects of proposal submission. She has been ably assisted by Jeanie Cornet, Joan Dandona, and Bee Hanson for word processing and copying. Jeanie Cornet has maintained the computerized system of accounting to assure that grant financial records are up to date and easily accessible.

As noted in the new organization chart, effective at the end of this academic year, Barbara Hagen has retired and her responsibilities have been taken over by Jeanie Cornet. Jeanie's former position has, in turn, been filled by Irene McDaniel, a new member of the CORI staff who is showing great promise in making improvement to the computerized accounting system needed to keep CORI clients fully informed of the status of their grant funds.

A major concern of most researchers is to be able to acquire space in which the research can be conducted. CORI maintains excellent space for research assistants and provides help in acquiring space unique to most grant requirements. In addition, CORI can provide space for research seminars, site meetings with funding agencies, and for staff meetings of research teams. Two seminar type meeting rooms are available in North Hall, plus the Pellish Room, a deluxe space for important visitors from off campus and for special meetings for the planning and initiation of multidisciplinary projects.

An important aspect of proposal submission, grants management and research reporting is the facility to get out printed materials quickly and easily. CORI maintains a high quality word processing operation with a Tandy Model 16 computer and printer. That machine is a multiuser machine that can simultaneously be used to maintain CORI's accounts. Additionally, CORI has acquired an IBM PC/AT that is being used for word processing and developmental work. The AT is coupled with a Hewlett Packard laser printer to provide quality output for research papers and reports. Plans are underway to link up the variety of printing and computing facilities within CORI to increase the efficiency of use of all this equipment.

**BARBARA HAGEN: RETIREMENT**

We share with Barbara her joy in being able to retire after fifteen very successful years in which she has participated in the growth of CORI from a level of annual extramural support of less than \$30,000 to this year's level of \$1,950,432. Her conscientious efforts and effectiveness in dealing with CORI clients have had much to do with this history of growth. We will all miss her contribution and her cheery and positive attitude. At the same time, we wish her well with retirement in a new lifestyle we understand she is managing very satisfactorily.

## RESEARCH IN PROGRESS

**Title:** Establishment of the Center for the Study of Spatial Cognition and Performance, an interdisciplinary research group in Cognitive Science, with an emphasis on problems in spatial cognition.

**PI's:** Roberta Klatzky, Professor of Psychology  
James Pellegrino, Professor of Education  
Terence Smith, Professor of Geography and Computer Science  
Sally Doherty, Postgraduate Research Psychologist

**Abstract:** An interdisciplinary group has been formed under the auspices of CORI in an effort to initiate a Cognitive Science Program at UCSB, and to provide an active, on-site facility for Cognitive Science at UCSB.

**Title:** Decision Science Program

**PI's:** David Messick, Professor of Psychology  
Perry Shapiro, Professor of Economics

**Abstract:** Decision Science is the study of decision making both for individuals and groups. The goal of this research is to develop a set of proposals to support both research and curriculum. The principal investigators propose to start both a research and teaching program in Decision Science at UCSB.

**Title:** Maternal and Child Health Data Base: Development, Application and Dissemination

**PI:** Ronald L. Williams, Research Economist

**Assoc.:** E. Clingman, Specialist  
F. Rust, Specialist  
K. Rust, Specialist  
C. Phibbs, Specialist

**Students:** J. Doyle, Assistant  
T. Tran-Viet, Assistant

**Staff:** J. Marinko, Computer Programmer

**Abstract:** Application and development of the Maternal and Child Health Data Base will be continued and expanded.

**Title:** Automated Perinatal Information System

**PI:** Ronald L. Williams, Research Economist

**Staff:** P. Chen, Sr., Computer Programmer

**Abstract:** Automated Vital Statistics System (AVSS) has been developed for California hospitals. Birth data is collected on pregnancy and labor and delivery complications in order to identify the sources of poor perinatal outcomes. The program is expanding to include other states.

**Title:** AVSS Training and Consulting Support

**PI:** Ronald L. Williams, Research Economist

**Staff:** R.H. Falkenberg, Sr. Administrative Analyst  
E. Morales-Falkenberg, Administrative Analyst

**Abstract** The Automated Vital Statistics System (AVSS) is being implemented within the California district health departments, and training and support provided for its use.

**Title:** Computerized Assessment of Spatial Abilities

**PI:** James Pellegrino, Research Psychologist  
**Students:** R. Abate, Research Assistant  
D. Alderton, Research Assistant  
**Abstract:** Research on the development of a computerized battery of spatial ability tests is being conducted.

**Title:** The Effects of Alternate Pricing Policies on the Adoption of Innovative Irrigation Systems in California  
**PI:** Margriet F. Caswell, Assistant Research Economist  
**Student:** R. Lathrop, Research Assistant  
**Abstract:** The final objective of this project is to estimate the impact of changing water prices on the volume of agricultural wastewater.

**Title:** International Conference on Phloem Transport  
**PI's:** James Cronshaw, Research Biologist  
W.J. Lucas, Research Biologist  
**Abstract:** A conference bringing together scientists from around the world who specialize in phloem transport was held at Asilomar, California, August 18-23, 1985.

**Title:** Domesday Book Database  
**PI's:** C. Warren Hollister, Research Historian  
Robin Fleming, Associate Specialist  
**Students:** K. Mack, Postgraduate Researcher  
M. Whitacre, Research Assistant  
G. Graves, Postgraduate Researcher  
R. Frakes, Assistant  
V. Lopez, Assistant  
**Abstract:** Work on a comprehensive computerized database of the Domesday Book, the record of William the Conqueror's great land survey of A.D. 1086, is being continued.

**Title:** Constructing Geographic Expert Systems with Learning Capabilities  
**PI's:** Terence R. Smith, Research Geographer  
Ralph Dubayah, Research Assistant  
**Abstract:** Exploring machine learning as applied to geographic expert systems (GES) is the objective of this research.

**Title:** Knowledge Based Engineering for Data Base Management and Use  
**PI's:** Terence R. Smith, Research Geographer & Computer Scientist  
Donna J. Peuquet, Assistant Research Geographer  
John E. Estes, Research Geographer  
**Students:** K. Chow, Research Assistant  
M. Gersho, Assistant  
C. Chen, Research Assistant  
Y. Liu, Research Assistant  
P. Agarwal, Research Assistant  
U. Joglekar, Research Assistant  
E. Azar, Research Assistant  
M. Pazner, Postgraduate Researcher  
**Abstract:** The goal of this research is to implement a knowledge-based geographic information system called GIRLS (Geographic Information Retrieval and Learning System). The system is

designed as a basic tool so that users with interest in different knowledge domains may tailor the system to their own requirements.

**Title:** Community Choice and the Demand for Public Goods

**PI's:** Perry Shapiro, Research Economist  
Daniel Rubinfeld, Research Economist  
Ted Bergstrom, Research Economist

**Students:** R. Burnett, Assistant  
J.R. Church, Research Assistant  
K. Vogt-Nilsen, Research Assistant  
T. Terchun, Assistant

**Abstract:** Empirical analysis of data collected in surveys of voters in Michigan and Massachusetts is being used in estimating the demand for public goods, with particular emphasis on public education.

**Title:** Evaluating Alternative Sanctions in an Individual Choice Model: The Case of Drunken Driving Part II

**PI's:** Perry Shapiro, Research Economist  
Harold L. Votey, Research Economist

**ProPI:** M. Schniepp, Assistant Research Economist

**Student:** R. L. Burnett, Assistant

**Abstract:** Data on drunken driving is being analyzed to evaluate the effectiveness of drunken driving sanctions and to aid in the development of legislative and enforcement sanctioning policies.

**Title:** Male-Female Crime Rate Differentials: A Study of Effects of Causal and Control Forces

**PI's:** Llad Phillips, Research Economist  
Harold L. Votey, Jr., Research Economist

**ProPI:** M. Schniepp, Assistant Research Economist

**Abstract:** The focus of this research is to determine the causal and control factors responsible for the changing crime rate differentials between men and women.

**Title:** Sociological Aspects of Cleavage and Consensus Among Nations

**PI:** Seth Fisher, Research Sociologist

**Student:** K. von Meister, Assistant

**Abstract:** Expansion of Soc 146/194.

**Title:** Research and Analysis to Satisfy AB 1614 - Meetings

**PI's:** Daniel B. Botkin, Research Biological Scientist  
Harold L. Votey, Jr., Research Economist

**Staff:** C. Johnson, Word Processing Specialist

**Abstract:** California State Assembly Bill 1614, the Mono Lake Research Bill, requires a comprehensive analysis of the aquatic ecology, avifauna, air quality and hydrology of the Mono Basin. The primary purpose of this analysis is to facilitate management of the Mono Basin.

**Title:** Men's and Women's Commitment to Work and Family

**PI's:** William T. Bielby, Research Sociologist  
Denise D. Bielby, Associate Research Sociologist

**Abstract:** This project is studying the ways men and women's roles become sources of identity, how

individuals develop preferences for a particular balance of work and family activities, and how commitments are affected by work experiences.

**Title:** Research Conference on Preference Reversals

**PI's:** David M. Messick, Research Psychologist  
Perry Shapiro, Research Economist

**Students:** M. Riccioni, Research Assistant  
T. Millhoff, Assistant  
C.D. Samuelson, Assistant

**Abstract:** Invited participants presented original papers on the topic of preference reversals and acted as discussants in a three-day conference, held in Santa Barbara, February 10-12, 1986.

**Title:** Immigration, Self-Selection, and the Choice of Destination: The Cases of Australia, Canada, and the United States

**PI:** George J. Borjas, Research Economist

**Abstract:** The principal investigator is studying the process by which potential emigrants choose the country-of-destination and the productivity differences caused by the self-selection rule in the world.

**Title:** Supply Options for Electric Power

**PI:** Walter J. Mead, Research Economist

**Abstract:** The principal investigator is preparing a paper for the California Energy Policy seminar.

**Title:** The Private and Social Costs of Alternative Electric Power Technologies for California

**PI:** Walter J. Mead, Research Economist

**Student:** M.A. Denning, Research Assistant

**Abstract:** This project's goal is to estimate the private and social costs of four electrical power technologies--natural gas, oil, coal, and nuclear power.

## OTHER ACADEMIC ACTIVITIES

### Seminars

A series of colloquia presented by the Center for the Study of Spatial Cognition and Performance (CSSCAP), and jointly sponsored by the Departments of Computer Science, Psychology, and Geography was well attended by an interdisciplinary audience and generated a suitable intellectual climate for further development of collaborative research programs. Directed by Roberta Klatzky, James Pellegrino and Terence Smith, CSSCAP presented the following speakers during 1985/86:

- October 3** "Brain Mechanisms of Visuomotor Coordination in Frog and Toad." Michael A. Arbib, Computer Information Science. Center for Systems Neuroscience, University of Massachusetts. This talk presented two levels of modeling which bridge the gap between the overall behavior of an animal and detailed interactions in neural networks.
- October 17** "Algorithms Which Capture Fragments of Mathematical Reasoning." Jack Schwartz, Courant Institute, NYU. This talk presented several decidable sublanguages, which cover quantified and unquantified fragments of set theory and elementary analysis.
- October 18** "Mathematical and Neurocompatibility Issues in Shape Recognition." Jack Schwartz, Courant Institute, NYU. This talk formulated several neurocompatibility constraints which seem likely to apply, and presented some shape recognition algorithms which come close to meeting these constraints.
- November 14** "Cognitive Science with Neural Models." James Anderson, Professor of Psychology, Brown University. Discussion of concept forming abilities of neural models, with some experimental data, as well as demonstration of their usefulness to categorize and to act as a simple distribution data base.
- February 11** "The Organization of an Adaptive System Based on Sparse, Distributed Memory." Pentti Kanerva, Research Institute for Advanced Computer Science, NASA Ames Research Center. The following topics were discussed: the architecture of a sparse, distributed memory; the encoding problem; an internal model of the world and statistical abstraction; the architecture of an adaptive system, and initial conditions for adaptive learning.
- March 6** "How do Children Decide What To Do?." Robert S. Siegler, Department of Psychology, Carnegie-Mellon University. This discussion focused on how children decide which strategy to use for problem solving, how the ability to make such choices develops, and what functions the strategy choice process serves.
- April 24** "Information and the Effects of Early Perceptual Experience." Hervert L. Pick, Jr., Institute of Child Development, University of Minnesota. The speaker discussed two very different aspects of mature perceptual function which seemed to depend on how prior (and perhaps early) experience affects sensitivity to perspective structure.
- May 8** "Concepts Without Similarity." Lance Rips, University of Chicago. The speaker discussed results from several experiments that demonstrate it is possible to alter category judgments with only minimal changes to judged similarity, and to alter similarity. Instead, category decisions are best viewed as a type of inference to the best explanations.
- June 9** "Updating Action Schemas in an Unfamiliar Setting." Urs Fuhrer, Program in Social Ecology, University of California, Irvine, and Swiss National Science Foundation. This discussion focused on how the presence of others within a certain setting and different levels of action schematic pre-knowledge shape the process of schema updating.



A series of seminars in Economic Theory was conducted through joint sponsorship of CORI and SPRI, and under the direction of Thomas Cooley (Department of Economics).

- October 9** "Information: Flows Intrinsic to the Stability of Equilibrium." James Jordan, Professor of Economics, Northwestern University.
- October 21, 22** "Optimum Product Diversity and the Incentives For Entry in Large Economies." Larry Jones, Professor of Economics, Northwestern University.
- November 1** "A Theory of Auditing and Plunder." Kim Border, Professor of Economics, California Institute of Technology.
- November 22** "Preference Reversals." Perry Shapiro, Professor of Economics, UC Santa Barbara.
- December 4** "Price Dispersion, Price Flexibility and Consumer Search." Peter Morgan, Professor of Economics, University of Western Ontario.
- December 5** "Contractual Arrangements, Tournaments and the Internal Organization of Firms." Louis Guasch, Professor of Economics, UC San Diego.
- December 9** "The Necessity of Imperfectly Using Information Illustrations in Rational Expectations, Organization Theory, Risk Preferences and More." Ronald Heiner, Professor of Economics, Brigham Young University.
- December 12** "The Strategic Transmission of Information in a Current Sequential Equilibrium Model." Leonard Mirman, Professor of Economics, University of Illinois.
- February 14** "On the Competitiveness of Large Cournot Markets." William Novshek, Professor of Economics, Stanford University.
- February 18** "Theory and Testing of Non-Cooperative Bargaining Models: An Outside Option Experiment." John Sutton, Professor of Economics, London School of Economics.
- February 24** "Monetary Dynamics With Fixed Costs." J. Fusselman, Professor of Economics, University of Chicago.
- March 3** "Tiebout Equilibrium Under Restricted Preferences Domain." Shlomo Weber, Professor of Economics, University of Minnesota.
- March 14** "Equilibrium in Noncooperative Models of Competition.: Nicholas Yannellis, Professor of Economics, University of Minnesota.
- April 7** "Consistent Conditional Systems in Noncooperative Game Theory." Andrew McLennan, Mathematical Sciences Research Institute, Berkeley, California.
- May 8** "The Irrelevance of Government Foreign Exchange Operations." Bruce D. Smith, Carnegie Mellon University and the Federal Reserve Board of Minneapolis.

## Conferences

### International Conference on Phloem Transport

August 18-23, 1985  
Asilomar, California

Financial support provided by the following: UC Santa Barbara; UC Davis; NSF; US Department of Agriculture; US Department of Energy; Agracetus; American Cyanamid Corporation; Dow Chemical Company; E.I. Du Pont de Nemours & Company, Inc.; FMS Corporation; ICI American Inc.; Monsanto Company; Pfizer Inc.; Pioneer Hi-Bred International, Inc.; Rhone-Poulenc Inc.; Rohm and Haas Company; Shell Development Company; Union Carbide Agricultural Products Company, Inc.; and Velsicol Chemical Corporation.

#### Participants included:

Dr. Frank Alfieri, California State University at Long Beach; Dr. M. Carol Alosi, UC Berkeley; Dr. D.A. Baker, Wye College, England; Dr. A.D. Barnabas, University of Texas; Dr. A.B. Bennett, UC Davis; Dr. Sabine Blechschmidt, Institut für Forstbotanik, West Germany; Dr. J.L. Bonnemain, Station Biologique de Beau Site, France; Dr. R. Bookardt, Universität Göttingen, West Germany; Dr. I.G. Bridges, Imperial Chemical Industries, England; Dr. D.B. Briskin, Utah State University; Dr. S.J. Britz, Plant Growth Laboratory, USDA; Dr. W. Brun, University of Minnesota; Dr. N. Jerry Chatterton, Utah State University; Dr. Mitsuo Chino, University of Tokyo, Japan; Dr. Bong-Heuy Cho, University of Iowa; Dr. Rudolf Christ, Ciba Geigy Ag., Switzerland; Dr. A.L. Christy, Monsanto Agricultural Products; Dr. C.G. Crawford, Cereal Science and Foods Laboratory; Dr. J. Cronshaw, UC Santa Barbara; Dr. Csaba Cseke, UC Berkeley; Dr. Sue E. Damon, UC Davis; Dr. Delrot, Station Biologique de Beau-Site, France; Dr. William F. Derr, California State University at Chico; Dr. Douglas Doehlert, USDA; Dr. Frances M. Dupont, US Department of Agriculture; Dr. W. Eschrich, Universität Göttingen, West Germany; Dr. Sam K. Essiamah, Universität Göttingen, West Germany; Dr. R.F. Evert, University of Wisconsin; Dr. Fred Felker, USDA; Dr. B.R. Fondy, Seton Hill College; Dr. V. Franceschi, Washington State University; Dr. Jorg Fromm, Universität Göttingen, West Germany; Dr. D. Geiger, University of Dayton; Dr. R.T. Giaquinta, Du Pont de Nemours & Co.; Dr. R.M. Gifford, CSIRO, Australia; Dr. John D. Goeschl, Texas A&M University; Dr. A.J. Gordon, Grassland Research Institute, England; Mr. Steve Griffith, University of Minnesota; Dr. Yaffa Grossman, UC Davis; Dr. Michael A. Grusak, UC Davis; Dr. J.L. Hall, The University, England; Dr. P. Haworth, Zoecon Corporation; Dr. H. Hayashi, University of Tokyo, Japan; Dr. Donald Hendrix, US Department of Agriculture; Dr. John E. Hendrix, Colorado State University; Dr. Dan Hess, Zoecon Corporation; Dr. John D. Hewitt, UC Davis; Dr. Rosemarie Heyser, Forstbotanisches Institut, West Germany; Dr. W.D. Hitz, Du Pont de Nemours & Co.; Dr. L. Ho, Grassland Crops Research Institute, England; Dr. J. Hoddinott, University of Alberta, Canada; Dr. Lynn Hoefert, US Department of Agriculture; Dr. Joy Honegger, Monsanto Company; Dr. Thomas Housley, Perdue University; Dr. Francisc C. Hsu, Shell Development Company; Dr. S.C. Huber, US Department of Agriculture/North Carolina State University; Dr. Thomas E. Humphreys, University of Florida; Dr. Leanne M. Jablonski, University of Dayton; Dr. J.J. Jachetta, Union Carbide Company; Dr. Karin Ruth Jacobsen, Forstbotanisches Institut, West Germany; Dr. C.F. Jenner, Waite Agricultural Research Institute, Australia; Dr. R.P.C. Johnson, Aberdeen University, Scotland; Dr. H.R. Kaback, Roche Institute; Dr. George Kaiser, Universität Würzburg, West Germany; Dr. Tian-Min Kang, UC Berkeley; Dr. David W. Keifer, FMC Corporation; Dr. Daniel A. Kleier, Shell Development Company; Dr. K.E. Koch, University of Florida; Dr. Leon Kochian, UC Davis; Dr. D.E. Komor, Universität Bayreuth, West Germany; Dr. Vince Lackney, University of Iowa; Dr. Robert Lamoreauz, Zoecon Corporation; Dr. A. Lang, Physics and Engineering Laboratory, New Zealand; Dr. Homer M. Le Barron, CIBA Geigy Corporation; Dr. Roger Lee, Memorial University; Dr. F.T. Lichtner, EI Du Pont de Nemours & Company; Dr. W. Lin, Du Pont de Nemours & Co.; Dr. W.J. Lucas, UC Davis; Dr. Monica Madore, UC Davis; Dr. Andrew Maretzki; Dr. Robert McNairn, California State University at Chico;

Dr. Jerome P. Miksche, US Department of Agriculture; Dr. H.A. Mooney, Stanford University; Dr. Ricardo Murphy, Trinity College, Ireland; Dr. Denny O'Neal, Basf Wyandotte; Dr. Christina E. Offler, University of Newcastle, Australia; Dr. Karl Oparka, Scottish Crop Research Institute, Scotland; Dr. J. Oross, UC Davis; Dr. Peter Orr, Pfizer Corporation; Dr. Katherine Osteryoung, UC Davis; Dr. J.S. Pate, University of West Australia, Australia; Dr. J.W. Patrick, University of Newcastle, Australia; Dr. T.C. Pesacreta, Harvard University; Dr. Gregory A. Porter, Pennsylvania State University; Dr. Clark Porter, Monsanto Company; Dr. W. Van B. Robertson, National Science Foundation; Dr. Shirley Rodaw, American Cyanamid Company; Dr. Bill Russin, University of Wisconsin; Dr. Dinkar D. Sabnis, University of Aberdeen, Scotland; Dr. Tammy Sage, UC Davis; Dr. Judy G. Schmalstic, Dupont de Nemours & Co.; Dr. Mark P. Schmitt, Monsanto Company; Dr. Alexander Schulz, Universitat Heidelberg, West Germany; Dr. Jeff Schussler, University of Minnesota; Dr. Jacob Secor, Dow Chemical Company; Dr. J.C. Shannon, University of Pennsylvania; Dr. Richard C. Sicher, US Department of Agriculture; Dr. Steve R. Simmons, University of Minnesota; Dr. Richard D. Sjolund, University of Iowa; Dr. S. Sovonick, University of Cincinnati; Dr. R.M. Spanswick, Cornell University; Dr. M. Stitt, Universitat Gottingen; Dr. David D. Stranz, Shell Development Company; Dr. Margaret Thom; Dr. Bruce R. Thomas, Calegene, Inc.; Dr. J.H. Thorne, Du Pont de Nemours & Co.; Dr. M.M. Tollenaar, University of Guelph; Dr. R. Turgeon, Cornell University; Dr. Chris Van Campfort, FMC Corporation; Dr. D. Vruegdenhil, Agricultural University, The Netherlands; Dr. Terence Walsh, Dow Chemical Company; Dr. Robert D. Warmbrodt, University of Maryland; Dr. C. Wilson, UC Davis; Dr. P. Wolswinkel, Botanisch Laboratorium, The Netherlands; Dr. R.E. Wyse, Utah State University; Dr. Eli Zamski, Department of Agriculture and Botany, Israel.

#### **Research Conference on Preference Reversals**

February 10-12, 1986  
Santa Barbara, California

Sponsored by the Decision Science Institute, under the direction of David Messick, Department of Psychology and Perry Shapiro, Department of Economics. Funded in part by the Alfred P. Sloan Foundation.

Speakers included:

Dr. Haya Bar-Hillel, Hebrew University; Dr. Don L. Coursey, University of Wyoming; Dr. Daniel Kahneman, University of British Columbia; Dr. Kenneth MacCrimmon, University of British Columbia; Dr. William Goldstein, University of Chicago; Dr. Eric Johnson, Carnegie Institute; Dr. Sarah Lichtenstein, University of Oregon; Dr. Vernon Smith, University of Arizona; Dr. Richard Thaler, Cornell University; Dr. Amos Tversky, Stanford University.

## Publications

- Bielby, D.** Goal incongruence, interdependence, and decision-making in a "high-tech" firm. *Research in the Sociology of Work*, forthcoming (with W. T. Bielby and W. C. Brastow).
- The way it was: Topical organization in elderly conversation. *Language and Communication*, 6, 1986 (with D. Boden).
- From data to data. Review of *From Sun to Sun* by William Michelson. *Contemporary Psychology*, 1986.
- Work commitment, sex role attitudes, and women's employment. *American Sociological Review*, 49, 1984 (with W. T. Bielby). Reprinted in Miller, Everett (ed.), *Society and Culture*. Acton, MA: Copely Publishing, 1986.
- Maternal employment and socioeconomic status as factors in daughter's career salience: Some substantive refinements. Reprinted in Acock, A. C. and J. Clair (eds.), *Adolescence and the Family: A Review of Socialization, Ethnicity, and Delinquency, 1975-1985*. Garland Publishing Co., 1986.
- Bielby, W. T.** Undoing discrimination: Comparable worth and job integration. In C. Bose and G. Spitze (eds.), *Ingredients for Women's Employment Policy*. Albany: State University of New York Press, forthcoming (with James N. Baron).
- The proliferation of job titles in organizations. *Administrative Science Quarterly*, forthcoming (with James N. Baron).
- The structure of opportunity: How promotion ladders vary within and among organizations. *Administrative Science Quarterly*, forthcoming (with James N. Baron and Alison Davis-Blake).
- Goal incongruence, interdependence and decision-making in a "high tech" firm. *Research in the Sociology of Work*, forthcoming (with D. Bielby and W. C. Brastow).
- Arbitrary metrics in multiple indicator models of latent variables. *Sociological Methods and Research*, 15, 1986.
- Arbitrary normalizations (comments on Sobel, Arminger and Henry). *Sociological Methods and Research*, 15 (1), 1986.
- Sex segregation within occupations. *American Economic Review*, 76 (2), 1986 (with James N. Baron).
- Statistical power in covariance structure models. In Nancy Tuma (ed.), *Sociological Methodology, 1986*. Washington, D.C.: American Sociological Association, forthcoming (with R. N. Matsueda).
- Men and women at work: Sex segregation and statistical discrimination. *American Journal of Sociology*, 91 (4) 1986 (with James N. Baron).
- Contractual arrangements. Review of *Households, Employment, and Gender: A Social, Economic and Demographic View* by Paula England and George Farkas. *Science*, 232 (4753), 1986.

- Borjas, G.** *Hispanics in the U. S. Economy*. G. Borjas, M. Tienda (eds.). Academic Press, 1985.
- Jobs and employment for Hispanics. In P. Cafferty and W. McCready (eds.), *Hispanics in the United States: A New Social Agenda*. Transaction Press, 1985.
- Assimilation, changes in cohort quality, and the earnings of immigrants. *Journal of Labor Economics*, October, 1985.
- The post-service earnings of military retirees. In Curtis Gilroy (ed.), *Army Manpower Economics*. Westview Press, 1986 (with Finis Welch).
- The sensitivity of labor demand functions to choice of dependent variable. *Review of Economics and Statistics*, Feb. 1986.
- The earnings of state government employees in the United States. *Journal of Urban Economics*, March, 1986.
- The demographic determinant of the demand for black labor. In Richard B. Freeman and Harry J. Holzer (eds.), *The Black Youth Employment Crisis*. Chicago: University of Chicago Press, 1986.
- The post-service earnings of military retirees: Evidence from the Air Force. *Research in Labor Economics*, forthcoming (with Finis Welch).
- The self-employment experience of immigrants. *Journal of Human Resources*, forthcoming.
- Immigrants, minorities, and labor market competition. *Industrial and Labor Relations Review* (forthcoming).
- Caswell, M.** The effects of well depth and land quality on the choice of irrigation technology. *American Journal of Agricultural Economics*, 68, in press (with David Zilberman).
- Cronshaw, J.** *Phloem Transport, Plant Biology, Vol 1*. W. J. Lucas, R. T. Giaquinta (eds.). Alan R. Liss, Inc.: New York, 1986.
- Doherty, S.** Towards reassembling the image. *Children's Environments Quarterly*, in press (with N. Gale, R. G. Golledge, and J. W. Pellegrino).
- Developmental changes in neighborhood scene knowledge. *Children's Environments Quarterly*, in press (with J. W. Pellegrino).
- Fisher, S.** Studying socialization and learning about one's self in school. *Journal of Clinical Sociology*, in press.
- Economic development and crime. *Journal of Economics and Sociology*, forthcoming.
- Fleming, R.** Domesday Book and the tenurial revolution. *Anglo-Norman Studies*, 9 1986.
- Klatzky, R.** The response criterion problem in tests of hypnosis and memory. *International Journal of Clinical and Experimental Hypnosis*, 33, 1985 (with M. Erdelyi).
- Spatial- and movement-based heuristics for encoding pattern information through touch. *Journal of Experimental Psychology: General*, 114, 1985 (with P. Barber and S. Lederman).

Verbal rehearsal and memory in language disordered children. *Journal of Speech and Hearing Research*, 28, 1985 (with D. Kirchner).

Identifying objects by touch: An "expert system." *Perception & Psychophysics*, 37, 1986 (with S. Lederman and V. Metzger).

Experimental psychologists in industry: Perspectives of employers, employees, and educators. *American Psychologist*, 40, 1985 (with E. Alluisi; W. Cook; G. Forehand; and W. Howell).

Levels of representation and memory for faces. In H. D. Ellis, M. A. Jeeves, F. Newcombe, and A. W. Young (eds.), *Aspects of Face Processing*. Dordrecht: Martinus Nijhoff, in press.

Hand: Haptic Apprehension and naming device. Technical Report 8601, *Cognitive Science Report Series*, UCSB, 1986 (with K. Andre, S. Lederman, and R. Roan).

**Mack, K.** Book review of *Domesday Book After Nine Hundred Years* (by Elizabeth Hallam-Smith). Albion, 1986 forthcoming.

**Mead, W. J.** Sensitivity of rates of return and output to alternative tax scenarios: The case of the U. S. Gulf of Mexico OCS. *The Energy Journal*, Special Tax Issue, 1985 (with D. Muraoka).

*OCS Oil and Gas Leasing, Theoretical and Policy Issues*. Ballinger Press, 1986 (with A. Moseidjord, D. Muraoka, and P. Sorensen).

Competition in outer shelf oil and gas lease auctions: A statistical analysis of winning bids. *Natural Resources Journal*, 26, 1986 (with A. Moseidjord, D. Muraoka, and P. Sorensen).

The social costs of electric power from nuclear and coal. Proceedings Vol. I, Eighth Annual International Conference, IAEE, Tokyo, Japan, June, 1986 (with Mike Denning).

Testimony. U. S. House of Representatives OCS subcommittee, The Merchant Marine & Fisheries Committee, May 13, 1986.

Factors shaping the outlook for world oil prices. Proceedings of Conference on Energy and the Southwest Economy, Federal Reserve Bank, Dallas, in press.

The OPEC cartel thesis re-examined--Price constraints from oil substitutes. *Journal of Energy and Economic Development*, in press.

**Messick, D.** Effects of soliciting opinions on contributions to a public good. *Journal of Applied Social Psychology* 15, 1985 (with S. T. Allison & C. D. Samuelson).

Estimating social and nonsocial utility functions from ordinal data. *European Journal of Social Psychology*, 15, 1985 (with K. P. Sentsis).

Why we are fairer than others. *Journal of Experimental Social Psychology*, 21, 1985 (with S. Bloom, J. P. Boldizar, & C. D. Samuelson).

Effects of experience on performance in a replenishable resource trap. *Journal of Personality and Social Psychology*, 49, 1985 (with S. T. Allison).

The group attribution error. *Journal of Experimental Social Psychology*, 21, 1985 (with S. T. Allison).

Utopia or myopia: A reply to Fox. *American Psychologist*, 40, 1986 (with S. T. Allison, J. K. Beggan, & C. D. Samuelson).

Alternative structural solutions to social dilemmas. *Organizational Behavior and Human Decision Processes*, 37, 1986 (with C. D. Samuelson).

Individual restraint and structural change as solutions to social dilemmas. In H. A. M. Wilke, D. M. Messick, & C. G. Rutte (eds.), *Experimental Social Dilemmas*. Frankfurt: Peter Lang, 1986 (with C. G. Rutte, C. D. Samuelson & H. A. M. Wilke).

Leadership in social dilemmas: Efficiency and equity. In H. A. M., Wilke, D. M. Messick, & C. G. Rutte (eds.), *Experimental Social Dilemmas*. Frankfurt: Peter Lang, 1986 (with C. G. Rutte, H. A. M. Wilke, A. P. Wit).

*Experimental Social Dilemmas*. H. A. M. Wilke, D. M. Messick, & C. G. Rutte (eds.). Frankfurt: Peter Lang, 1986).

Decision making in social dilemmas. In P. Brehmer, H. Jungerman, P. Lourens, & G. Sevon (eds.), *New Directions in Research on Decision Making*. Amsterdam: North Holland.

**Pellegrino, J.** Analyses of spatial aptitude and expertise. In S. Embretson (ed.), *Test Design: Development in Psychology and Psychometrics*. N. Y.: Academic Press, 1985 (with R. J. Mumaw and V. Shute).

Intelligence: Perspectives, theories and tests. In T. Husen and T. N. Postlethwaite (eds.), *International Encyclopedia of Education*. Oxford: Pergamon Press, 1985 (with C. K. Varnhagen).

Abilities and aptitudes. In T. Husen and T. N. Postlethwaite (eds.), *International Encyclopedia of Education*. Oxford: Pergamon Press, 1985 (with C. K. Varnhagen).

Developmental and individual differences in long-term memory retrieval. In R. F. Dillon (ed.), *Individual Differences in Cognition, Vol. 2*. New York: Academic Press, 1985 (with D. H. Gitomer).

Developmental differences in understanding and solving simple mathematics word problems. *Cognition and Instruction*, 2, 1985 (with R. Morales and V. Shute).

*Human intelligence: Perspectives and prospects*. New York: Freeman (1985) (with R. Kail).

Individual differences in process outcomes for verbal analogy and classification solution. *Intelligence*, 9, 1985 (with D. Alderton and S. Goldman).

Expanding intelligence testing with interactive computer terminals. A critique and prospectus. *Intelligence*, 9, 1985 (with E. Hunt).

A conceptual model and empirical analysis of children's acquisition of spatial

knowledge. *Journal of Environmental Psychology*, 5, 1985 (with R. Golledge, T. Smith, S. Doherty, and S. Marshall).

Anatomy of analogy. *Psychology Today*, October, 1985.

Intelligence: The interaction of culture and cognitive processes. In R. J. Sternberg and D. K. Detterman (eds.), *What is Intelligence?* Norwood, N.J.: Ablex, 1986.

Measuring versus understanding individual differences in cognitive abilities. In S. Modgil and C. Modgil (eds.), *Arthur Jensen: Consensus and Controversy*. London: Falmer Press, in press.

Developmental changes in neighborhood scene recognition. *Children's Environments Quarterly*, in press (with S. Doherty).

Toward reassembling the image. *Children's Environments Quarterly*, in press (with N. Gale, S. Doherty, and R. Golledge).

Hemisphere differences for components of mental rotation. *Brain and Cognition*, in press (with S. Fischer).

Information processing and elementary mathematics. *Journal of Learning Disabilities*, in press (with S. R. Goldman).

Information processing and educational technology: Where do we go from here? *Journal of Learning Disabilities*, in press (with S. R. Goldman).

Dimensions and components of individual differences in spatial abilities. In S. Irvine and S. Newstead (eds.), *Intelligence and cognition: Contemporary Frames of Reference*. Dordrecht, Netherlands: Martinus Nijhoff, 1986 (with D. F. Lohman, D. L. Alderton, and J. W. Regian).

Knowledge about handshaping and knowledge about objects. *Journal of Motor Behavior*, in press (with R. Klatzky, B. McCloskey, S. Doherty, and T. Smith).

Mental models and mental tests. In H. Braun and H. Wainer (eds.), *Test Validity*, in press.

On the importance of absolute and relative time. *Journal of Learning Disabilities*, in press (with S. Goldman and M. Gerber).

Effective drill and practice on the microcomputer. *Academic Therapy*, in press (with S. Goldman).

Phillips, L. An econometric test of structural change in the demographic transition. *The Scandinavian Journal of Economics*.

Deaths from gastrointestinal cancer in the runicipios of Nuevo Leon: 1980-83, probably cause for water sampling. *First Conference on Environmental Economics in Mexico and Latin America, Proceedings*, 1986 (with E. Lopez and M. Silas).

An econometric test of structural change in the demographic transition. *The Scandinavian Journal of Economics*, 87, 1985 (with S. Hayes and H. L. Votey).



- Shapiro, P.** Tiebout Bias and the Demand for local public schooling. UCSB Working Paper in Economics #251.
- Residential choice and the demand for public education: Estimation using survey data. In Golledge and Timmermans (eds.), *Behavioral Modeling in Geography and Planning*, in press (with J. Roberts and D. Rubinfeld).
- Smith, T.** Production system models of residential search behavior: A comparison of behavior in computer-simulated and real-world environments. *Environment and Planning A*, 17, 1985 (with W. A. V. Clark).
- A conceptual model and empirical analysis of children's acquisition of spatial knowledge. *Journal of Environmental Psychology*, in press (with R. G. Golledge, J. W. Pellegrino, S. Doherty, and S. P. Marshall).
- Functional invariance under spatial aggregation from continuous spatial interaction models. *Geographical Analysis*, 17, 1985 (with M. G. Schwab).
- Control of spatial search for queries in a knowledge based geographical information system. Proceedings of the International Conference on Advanced Techs. for Monitoring and Processing Global Environmental, Data Remote Sensing Society, London, England, 1985 (with D. P. Peuquet).
- An analysis of the efficacy and efficiency of hierarchical procedures for computing trajectories over complex surfaces. *European Journal of Operations Research*, 1986 (with R. E. Parker).
- Computable functions and complexity in neural nets. In J. Casti (ed.), *Proceedings of the Abisko Conference on Neural Computation*, Elsevier, in press.
- Votey, H. L.** An econometric test of structural change in the demographic transition. *The Scandinavian Journal of Economics*, 87, 1985 (with S. Hayes and L. Phillips).
- Taking account of systems interactions in modeling road accident. *Accident Analysis and Prevention*, 18, 1986 (Special Issue on Accident Modelling).
- Determining the cost effectiveness of accident control measures: Theory data acquisition and modeling challenges. In G. Maycock, "Accident Modelling and Economic Evaluation," *Accident Analysis and Prevention*, 18, 1986 (Special Issue on Accident Modelling).
- Drug abuse and the serious traffic offender. *Alcohol, Drugs and Traffic Safety*, Proceedings of the 10th International Conference, Amsterdam, 1986.
- Moral compliance, private self-interest and exposure to the law: The response of Swedish drivers to drunken driving controls. *Econometric Analyses of Crime in Sweden*. Brottsförebyggande Rådet, Stockholm, in press (with Perry Shapiro).
- Substance abuse and crime in Sweden: An econometric estimate of linkages. *Econometric Analyses of Crime in Sweden*. Brottsförebyggande Rådet, Stockholm, in press.
- The allocation of policy manpower across counties in Sweden. *Econometric Analyses of Crime in Sweden*. Brottsförebyggande Rådet, Stockholm, in press.

Williams, R. L. Black neonatal mortality: How can it be reduced? *Journal of the American Medical Association*, 253, 1985 (with N. J. Binkin, C. J. R. Hogue, and P. M. Chen).

Pregnancy outcomes among Spanish surname women in California. *American Journal of Public Health*, 76, 1986 (with N. J. Binkin and E. J. Clingman).

Geocoding public health information. *MUMPS Users' Group Quarterly*, 16, 1986 (with L. J. Thorpe).

The automated vital statistics system: A progress report of continued development and implementation. *MUMPS Users' Group Quarterly* 16, 1986 (with P. M. Chen and J. A. Marinko).

### Papers Completed, Submitted or In Progress

Bielby, D. Sex differences in the allocation of effort to work and family. Submitted for publication (with W. T. Bielby).

Sources of diversity in economic well-being of the elderly. Submitted for publication (with J. I. Baldwin).

She works hard for the money: Household responsibilities and the allocation of work effort. Submitted to *American Journal of Sociology* (with W. T. Bielby).

Bielby, W. T. She works hard for the money: Household responsibilities and the allocation of work effort. Submitted to *American Journal of Sociology* (with D. Bielby).

Borjas, G. The economics of non-price rationing. Report to the U. S. Information Agency, February, 1986.

The myth of immigrant assimilation in the labor market.

Earnings determination: A survey of the neoclassical approach.

The labor market experiences of young men (with Finis Welch).

Immigrants and the U. S. labor market.

Immigrants in the labor market: A comparison of the 1970 and 1980 census cross-sections.

Immigration and self-selection: An analysis of intercounty differences.

The economic consequences of immigration (with Marta Tienda).

Caswell, M. The economics of land-quality-augmenting irrigation technologies. Submitted to *Journal of Environmental Economics and Management* (with David Zilberman).

Doherty, S. Hand shaping and object processing. Submitted to *Journal of Motor Behavior* (with R. L. Klatzky, B. McCloskey, J. W. Pellegrino, T. R. Smith).

Klatzky, R. Hand Shaping and Object Processing. Submitted to *Journal of Motor Behavior* (with S. Doherty, B. McCloskey, J. W. Pellegrino, T. R. Smith).

Effects of movement and spatial extent on the movement distortion effect in haptic spatial processing (with S. Lederman, A. Collins, J. Wardell).

Traits and social caricatures: Levels of categorization in person perception (with S. Andersen).

Hand movements: A window into haptic object processing (with S. Lederman).

UNIX knowledge and users' expertise (with S. Doane and J. Pellegrino).

**Pellegrino, J.** The interaction of expertise and specific context in word recognition. Submitted for publication (with S. McIntyer and P. Drum).

Unix mental models and UNIX expertise. Submitted for publication (with S. Doane and R. Klatzky).

Characteristics of cognitive cartography. Submitted for publication (with V. Shute and J. W. Regian).

Unix performance and Unix expertise. Submitted for publication (with S. Doane and R. Klatzky).

Expertise in basic addition facts: Extended practice effects for learning disabled students. Submitted for publication (with S. Goldman and D. Mertz).

**Phillips, L.** The changing criminal activity of women: A labor force participation perspective. Submitted to *Eastern Economic Journal* (with H. L. Votey).

The influence of police intervention and alternative income sources on the dynamic process of choosing crime as a career. Submitted to *Journal of Quantitative Criminology* (with H. L. Votey).

**Shapiro, P.** The efficiency of supply of public education. NBER Working Paper.

Residential choice and the demand for public education: Estimation using survey data. Mimeo.

Tiebout bias and the demand for local public schooling. Submitted to *Review of Economics and Statistics* (with D. Rubinfeld and J. Roberts).

The efficiency of supply of public education. Submitted to *Journal of Public Economics* (with T. Bergstrom, J. Roberts and D. Rubinfeld).

Drunk Driving - An Analysis of Swedish and Santa Barbara Data. In progress.

Cost and Demand for Education. In progress.

Taking: An Economic-Constitutional Perspective. In progress.

**Smith, T. R.** KBGIS-II: A Knowledge-based Geographical Information System. Submitted to *International Journal of Geographical Information Systems* (with D. P. Peuquet, S. Menon and P. Agarwal).

Knowledge about Hand Shaping and Knowledge about Objects. Submitted to *Journal of Motor Behavior* (with R. Klatzky, B. McCloskey, S. Doherty, J. Pellegrino).

Requirements and Principles for the Implementation and Construction of Large-Scale Geographic Information Systems. Submitted to *International Journal of Geographical Information Systems* (with S. Menon, J. Star and J. E. Estes).

Algorithms for Local, Iterative Computation of Optimal Paths. In progress (with O. Egecioglu and J. Moodies).

Using Iterative Relaxation Procedures to Label Occluded Regions in Oblique Images. In progress (with R. Miko).

A Production System for Labelling Occluded Regions in Oblique Images. In progress (with R. Shah).

Genetic Algorithms Applied to the Calibration of Choice Set Constrained Interaction Models of Migration. In progress (with K. de Jong).

Votey, H. L. Safety programme evaluation in developing countries. *Road Traffic Accidents in Developing Countries*, Proceedings of the 1st International Conference, Benin City, Nigeria, 1986 (submitted).

Williams, R. L. Racial differences in neonatal mortality: What causes of death contribute to the gap? (with N. J. Binkin and E. J. Clingman).

### Papers Presented, Seminars and Colloquia

Bielby, D. "Sources of Diversity in Economic Well-Being of the Elderly." Presented to the Pacific Sociological Association, Denver Colorado, April 1986.

"She Works Hard for the Money: Household Responsibilities and the Allocation of Effort." Presented to the Society for Women in Sociology - Los Angeles Chapter, February 1986.

"Men's and Women's Work Commitment and Allocation of Effort." Presented to the American Sociological Association, Washington, D.C., August 1985 (with W. T. Bielby).

Bielby, W. T. "Sex Segregation Within Occupations." Presented to the American Economics Association, New York, December 1985 (with James N. Baron).

"She Works Hard for the Money: Household Responsibilities and the Allocation of Effort." Presented to the American Sociological Association, Washington, D. C., August 1985 (with Denise D. Bielby).

"The Proliferation of Job Titles in Organizations." Presented to the American Sociological Association, Washington, D. C., August 1985 (with James N. Baron).

"Men and Women at Work: Sex Segregation and Statistical Discrimination." Presented to the Western Economics Association, Los Angeles, July 1985 (with James N. Baron).

"Networks and Organizations." Presented to the Sunbelt Network Conference, Santa Barbara, February 15, 1986.

"Structure in Stratification Research." Presented to the Sociology Retreat, Department of Sociology, UCSB, Santa Barbara, January 1986.

"Sex Segregation and Statistical Discrimination." Presented to the UCLA Labor Economics Workshop, February 25, 1986.

"Social Stratification." Presented to the Conference on Trends in Sociology, Committee on Scholarly Communication with the People's Republic of China, Washington, D. C., August 20-30, 1985.

Caswell, M. "The Effect of Water Price on Adoption of Irrigation Technologies." Presented to the Western Economic Association Conference, Anaheim, California, July 1985.

"The Socio-Economic, Legal, Historical, and Cultural Aspects of Global Environmental Change." Presented to the Man's Role in Changing the Global Environment Conference, Venice, Italy, October, 1985.

"Effects of Alternative Pricing policies on the Adoption of Innovative Irrigation Systems in California." Presented to the Water Resources Center Advisory Council Meeting, May, 1986.

Klatzky, R. "Apprehending Spatial Information from Touch." Invited colloquium, University of Iowa, Iowa City, April, 1985.

"Levels of Representation and Memory for Faces: Presented to the NATO Advanced Research Workshop, Aspects of Face Processing, Aberdeen, Scotland, July 1985.

"Knowledge-based Control of Human Hand Movement." Presented to Engineering Foundation Conference on Biomechanics and the Neural Control of Movement, Henniker, New Hampshire, July 1985 (given by S. Lederman).

"Hand Movements: A Window into Haptic Object Recognition." Presented to Convention of Psychonomic Society, November 1985, Boston. (With S. Lederman.)

Mead, W. J. "Electric Power Energy Sources for California." Presented to the Western Economic Association, July, 1985.

"Factors Shaping Oil Prices in the Next Decade." Presented to the Conference on Energy in the Southwest Economy, Dallas, Texas, October 3-4, 1985.

"Electrical Power Options for California." Presented to the Universitywide Energy Research Group, U.C. Berkeley, January 10, 1986.

"The Social Costs of Electrical Power from Nuclear and Coal." Presented to the Eighth International Meeting of the International Association of Energy Economics, Tokyo, June, 1986.

"The Impact of Lower Oil Prices on OCS Oil and Gas Development." Testimony given to the U. S. House of Representatives, April 10, 1986.

"Financial Consequences of the Oil Price Decline." Presented to the Executive Committee of the American Bankers' Association, Santa Barbara, California, March 15, 1986.

Series of three lectures given at the Lewis and Clark College Energy Conference,

Portland, Oregon, Jan 23-24, 1986.

- Pellegrino, J.** "Intelligence and Intellectual Development: An Information Processing Perspective", with S. R. Goldman. Presented to the XX Inter American Congress of Psychology, Caracas, July, 1985.
- "Computer-based Assessment of Cognitive Abilities." Presented to the American Psychological Association, August, 1985.
- "Sex Differences in Spatial Ability: Componential Analysis of Process Differences," (with D. Alderton). Presented to the American Psychological Association, August, 1985.
- "The Modifiability of Spatial Processing Skills" (with J. W. Regian and V. Shute). Presented to the Psychonomic Society, November, 1985.
- "Cognitive Components Analysis." Presented to the American Educational Research Association, April, 1986.
- "Individual Differences in Skill Acquisition: Information Processing Efficiency and the Development of Automaticity." Presented to the American Educational Research Association, April, 1986.
- "Relationship of Number and Part-Whole Conceptual Knowledge and Math Task Performance of First and Second Grade Students" (with M. Lairon). Presented to the American Educational Research Association, April, 1986.
- Shapiro, P.** "Tiebout Bias and the Demand for Local Public Schooling." Presented to the Public Choice Society, 1985.
- "Efficiency of Supply of Public Education." Presented to the Claremont Graduate School, 1985.
- "Issues in the Demand for Public Education." Presented to the University of Maryland, Statue University of New York, Stoney Brook, University of Connecticut, Vanderbilt University, 1986.
- "Issues in Demand for Public Education," Presented to the Southern Economics Association Annual Meeting, 1986.
- "Taking: An Economics-Constitutional Perspective." Presented to the University of Michigan and to the Association of Real Estate and Urban Economics Meeting, 1986.
- Votey, H. L.** "Black and White Economic Opportunities, Welfare and Crime Involvement for Young Men and Women." Presented to the Crime Control Theory Conference, University of Maryland, July 10-12, 1985.
- Williams, R. L.** "How the Maternal and Child Health Data Base Can Be Used To Monitor the Progress of Perinatal Regionalization Efforts." Regional Perinatal Systems Program Workshop. Stanford University, August 20, 1985 (with C. S. Phibbs).
- "How the Automated Vital Statistics System Can Address Data Problems in Perinatal Health Care Systems." Presented to Stanford University, August 20, 1985.
- "Overview of Record Linkage: Theory and Practice." IMCHIS Workshop: Design and

Management Issues in the Creation of a Maternal and Child Health Database. Presented to Providence RI, October 17, 1985.

"How the Automated Vital Statistics System Can Be Implemented in a Small State." Presented to the New Hampshire Department of Health. Concord NH, May 5, 1986.

"Statistical Trends in California's Perinatal Data." Workshop given at the 1985 Clinical Conference of the National Perinatal Association. Orlando FL, November 17, 1985.

"Time trends in perinatal mortality rates from California's linked records." Presented to the National Infant Mortality Surveillance Conference. Centers for Disease Control. Atlanta GA, May 2, 1986.

"Geocoding public health information," (with L. J. Thorpe). Presented to the MUMPS Users' Group Annual Meeting. San Diego CA, June 12, 1986.

"The automated vital statistics system: A progress report of continued development and Implementation" (with P. M. Chen and J. A. Marinko). Presented to the MUMPS Users' Group Annual Meeting. San Diego, June 12, 1986.

"How The Automated Vital Statistics System Can Assist in Generating Health Statistics At The Local Level." Presented to the California Conference of Local Health Statisticians Annual Meeting. Sacramento CA, June 24, 1986.

### **Public and Professional Service Activities**

**Bielby, D.** Recipient (with W. T. Bielby) of the Kathleen Gregory Klein Award for Excellence in Feminist Studies for "She Works Hard for the Money..." Awarded by the Popular and American Culture Associations, May 1986.

Served as a reviewer on the following Review Panels:

National Science Foundation  
*Social Psychology Quarterly*  
*Social Forces*  
*American Sociological Review*  
*Sociology and Social Research*  
*Work and Occupations*  
*Sociological Forum*  
*Signs*  
*Social Science Quarterly*  
*Sociological Quarterly*

Served as a statistical consultant to the Writer's Guild of America, West.

**Bielby, W. T.** Served as a reviewer on the NSF Sociology Review Panel

Served as a statistical consultant, Writer's Guild of America, West

Served on the editorial board of *Sociological Methods and Research* and *Sociology of Education*, and acted as a referee to various other journals.

Recipient (with D. Bielby) of the Kathleen Gregory Klein Award for Excellence in Feminist Studies for "She Works Hard for the Money..." Awarded by the Popular and

American Culture Associations, May 1986.

Served as Secretary/Treasurer of the Methods Section of the American Sociological Association.

Served on the Council of the Organizations and Occupations Section of the American Sociological Association.

Caswell, M. Consultant to the Kern County Water Agency.

Served on the National Research Council's Water Science and Technology Board Committee on Irrigation-Induced Water Quality Problems.

Served on the Subcommittee on Systems Analysis for National Research Council Committee.

Acted as a reviewer for the following:

California Energy Studies Program  
Toxic Substances Research & Teaching Program  
*Hilgardia*  
*Water Resources Research*  
*Journal of Environmental Economics and Management*  
*American Journal of Agricultural Economics*

Klatzky, R. Invited reviewer of grants for National Science Foundation and the Air Force Office of Scientific Research.

Consultant to Educational Testing Service; member of its Visiting Panel on Research.

Chair of the American Psychological Association Task Force on the Employment of Experimental Psychologists in Industry.

Associate Editor, *Memory and Cognition*.

On editorial board of *Journal of Experimental Psychology: Learning, Memory and Cognition*.

Ad hoc reviewer for *Cognitive Psychology*. J. E. P.: Human Perception and Performance, *Psychological Review*.

Mead, W. J. Member, Selection Committee to Choose a New Publisher for the WEA journal *Economic Inquiry*.

Pellegrino, J. Served as guest consulting editor for the following:

*Journal of Experimental Psychology: Human Learning and Memory*  
*Journal of Experimental Child Psychology*  
*Memory & Cognition*  
*Psychological Review*  
*Cognitive Psychology*  
*Journal of Memory and Language*  
*Journal of Educational Psychology*  
*Educational Researcher*  
*Educational Psychologist*



*American Educational Research Journal*  
*Child Development*  
*American Psychologist*  
*Cognition and Instruction*  
*Science*  
*Canadian Journal of Psychology*  
*Journal of Personality*

**Shapiro, P.** Served as referee for the following:

*American Economic Review*  
*Economic Inquiry*  
*Journal of Political Economy*  
*National Tax Journal*  
*Journal of Economic Theory*  
NSF proposals  
*International Economic Review*  
*Land Economics*  
*Urban Geography*  
*Cambridge University Press*

Served on editorial board for the *National Tax Journal* and  
*Evaluation Quarterly*

**Smith, T. R.** Workshop leader and session chairman, International Conference on Advanced Technology for Monitoring and Processing Global Information, RSC, London, England, 1985.

Invited lecturer, Workshop on Modelling Complex Systems, I. Prigogine Center for Studies in Statistical Mechanics, University of Texas, Austin.

Invited lecturer, Jacob Marshak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, UC Los Angeles.

Invited lecturer, Workshop on Brain Research, Cognition and Artificial Intelligence, Abisko, Sweden.

Served as referee for the following:

Water Resources Research  
Transportation Research  
Geographical Analysis  
National Science Foundation  
*Environment and Planning*  
*Economic Geography*  
Department of Housing & Urban Development  
*Urban Geography*  
*Annals of the Association of American Geographers*  
*Professional Geographer.*

**Votey, H. L.** Invited participant, Association for Criminal Justice Research Panel on Drunken Deterrence, Los Angeles, October 17, 1985.

Invited lecturer, "Economics of Crime and Justice." San Marcos High School classes on Public Policy, January 13, 1986.

Served as referee for the following:

*Accident Analysis and Prevention*  
*Journal of Criminal Justice*  
*Law and Society Review*  
*Scandinavian Journal of Economics*

Served on Editorial Board for the following:

*Evaluation Review*  
*Journal of Quantitative Criminology.*

Williams, R. L. Served as reviewer for the following:

*American Journal of Obstetrics and Gynecology*  
*American Journal of Public Health*  
*New England Journal of Medicine*  
*Obstetrics and Gynecology*

Served as reviewer of grant proposals for:

Department of Health and Human Services  
March of Dimes - Birth Defects Foundation

Served as a consultant for:

Massachusetts Department of Public Health;  
Rhode Island Department of Health

Member of editorial board for the *Journal of Perinatology*

### **Breakthroughs in Research**

**Klatzky, R.** S. Lederman and Dr. Klatzky have completed their first studies on hand movements and the factors that determine their nature during object exploration. Data showing this preshaping activity have been gathered.

**Williams, R. L.** Research cited by UC President David Pierpont Gardner in his report to the Regents on May 16, 1986 under the caption: "Latina Women and Infant Mortality Rates Studies."

**EXPENDITURES - EXTRAMURAL**

<b>ACCOUNT NAME &amp; NUMBER</b>	<b>SALARIES BENEFITS</b>	<b>S&amp;E</b>	<b>EQUIP- MENT</b>	<b>TRAVEL DOMESTIC</b>	<b>TRAVEL FOREIGN</b>	<b>SUB- CONTRACTS</b>
Cal Fish & Game-Botkin 8-447628-20758	\$3425.86 619.23	\$9034.83		\$65.29		\$4000.00
Cal Hlth 85-86786-Williams 8-447628-20759	\$93526.81 22818.30	\$46004.30	\$52377.54	\$9929.53		
Cal Hlth 84565-Williams 8-447628-20769		\$457.86	\$8065.54			\$28109.76
Cal Hlth 85-86888-Williams 8-447628-20770	\$28088.03 1940.60	\$3469.14	\$6019.50	\$9211.68		
Cal Hlth 85-86519-Williams 8-447628-20779	\$2528.46 30.34	\$1064.78				
NSF SES84-00799-Smith 8-447628-22142	\$39525.86 2565.35	\$9863.06	\$4602.83	\$647.50	\$1565.40	
NSF SES84-12860-Phillips 8-447628-22155	\$27697.64 2849.15	\$5114.74	\$3653.85	\$740.65		
NSF SES84-09045-Shapiro 8-447628-22164	\$54956.00 2193.02	\$8540.90	\$325.05	\$1487.70		
NSF SES85-10172-Bielby 8-447628-22214	\$8774.84 1319.76	\$3436.04		\$1110.84		
NEH RT20213-82-Hollister 8-447628-23194	\$74362.46 828.88	\$3868.45	\$3058.00			
NASA NGT805-Smith 8-447628-23286				\$14389.45		
NASA NCC2-359-Smith 8-447628-23292	\$50841.53 1296.61	\$6819.85	\$67569.32	\$957.00		
NIH MCJ063211-02-Williams 8-447628-24398	\$129340.02 28393.09	\$5458.85	\$6112.23	\$2518.09		
PHLOEM CNF-Cronshaw 8-447628-49905		\$14339.65	\$2060.68	\$1636.56		
SLN FDN 85-11-3-Messick 8-447628-58376		\$1926.68		\$4106.95		

**EXPENDITURES - INTRAMURAL**

<u>DESCRIPTION</u>	<u>ADMIN SUPPORT</u>	<u>SUPPLIES &amp; EXPENSES</u>	<u>DIRECT RESEARCH</u>	<u>SPECIAL PROJECTS</u>
<u>19900</u>				
Staff Salaries	98536.00			
Benefits	32345.00			
S & E		5514.00		
Equipment				
Travel				
Special Projects				24925.00
WRC Caswell			19063.00	
UERG Mead			22128.00	
<u>07427</u>				
Salaries				
Benefits				
S & E		2419.00		
Equipment				
Travel				
Special Projects				57701.00
<u>09534</u>				
Matching Funds				1141.00
	<u>130881.00</u>	<u>7933.00</u>	<u>41191.00</u>	<u>83767.00</u>

**EXPENDITURES - EXTRAMURAL 1987-1988**

<b>Grant No./PI UCSB Account No</b>	<b>Salaries Benefits</b>	<b>S &amp; E</b>	<b>Equip- ment</b>	<b>Domestic Travel</b>	<b>Foreign Travel</b>	<b>Sub contract</b>
NSF SES85-10172/Bielby 8-447628-22214	\$166.32 \$1.88	\$3.00				
UPJOHN 860460/Borjas 8-447628-59828		\$3,337.53	\$1,709.25			
Sloan 87-5-12/Borjas 8-447628-58370	\$19,119.23 \$2,442.53	\$1,632.28				
CA Fish & Game/Botkin 8-447628-20758	\$8,280.71 \$610.07	\$14,896.38		\$3,822.98		
NSF SES87-20597/ Golledge 8-447628-22339	\$3,556.70 \$469.48	\$217.22				
AFOSR-87-0230/ Klatzky 8-447628-22537	\$29,505.09 \$3,229.93	\$877.29	\$2,945.07			
ONR-N00014-K-0232/ Klatzky 8-487628-25905	\$38,968.28 \$2,020.24	\$2,832.45	\$3,691.51	\$2,024.55		\$91,620.36
PHS EYO7022-01/ Loomis 8-447628-244834	\$42,797.38 \$4,888.79	\$12,081.31	\$10,532.94	\$504.79		
U WASH-11953/ Pelleg 8-447628-59759	\$77,557.05 \$4,893.24	\$4,907.33	\$3,410.94	\$1,799.99		
NSF SES87-11506/ Phillips 8-447628-22315	\$13,555.56 \$1,571.08	\$1,127.44	\$6,827.34			
NSF SES86-06322/ Phillips 8-447628-22268		\$1,563.16	\$1,880.55			
NSF SES84-09045/Shapiro 8-447628-22164	\$648.05 \$7.65	\$4,028.20	\$1,486.94	\$747.42		
UCSG 1408001-A0502/ Smith 8-487628-25684	\$24,474.95 \$280.09	\$4,962.58				
NSF SES87-21071/ Wtherford8-447628-22334	\$916.50 \$10.36					

Grant No./PI UCSB Account No	Salaries Benefits	S & E	Equip- ment	Domestic Travel	Foreign Travel	Sub contract
CA HLTH 86-88507,MOU 5A/ Williams 8-447628-20793		\$698.76				
CA HLTH 86-88507,MOU 5B/ Williams 8-447628-20801	\$162.03	\$2,305.67	\$924.26			
CA HLTH 87-91205/ Wilms 8-447628-20804	\$158,512.13 \$41,079.15	\$24,515.46				
<b>TOTALS:</b>	\$479,724.47	\$79,986.06	\$33,408.80	\$8,899.73	\$0.0	\$91,620.36

APPENDIX - B 1985-86 ANNUAL REPORT

Community & Organization  
 ORU Research Institute

STATISTICAL SUMMARY

1a) UCSB academic staff engaged in research:

a) Faculty	<u>20</u>	d) Postdoctoral	<u>6</u>
b) Professional Researchers	<u>1</u>	e) Graduate	<u>16</u>
c) Specialists	<u>6</u>	f) Undergraduates	<u>10</u>
g) Other (specify _____)			

TOTAL 59

1b) Participation from other campuses, colleges, universities, and industry:

a) Faculty	<u>12</u>
b1) Graduates	<u>1</u>
b2) Undergraduates	<u>-0-</u>
b3) Industry (designate)	<u>2</u>

TOTAL 15  
 See Appendix B-1

2) Number of employees and FTE in unit:

a) Employees on University Funds:

	Number	FTE
Professional	<u>          </u>	<u>          </u>
Technical Students	<u>11</u>	<u>.75</u>
Administrative	<u>4</u>	<u>1.61</u>
Clerical	<u>5</u>	<u>2.53</u>
TOTAL	<u>20</u>	<u>4.89</u>

TOTAL NUMBER: 20

TOTAL FTE: 4.89

b) Employees on Non-University Funds:

	Number	FTE
Professional	<u>32</u>	<u>7.75</u>
Technical Research	<u>29</u>	<u>4.69</u>
Staff Administrative	<u>2</u>	<u>2.00</u>
Clerical	<u>1</u>	<u>.01</u>
TOTAL	<u>64</u>	<u>14.45</u>

TOTAL NUMBER: 64

TOTAL FTE: 14.45  
See Appendix B-2

- 3) Number of Publications: (See Pg. \_\_\_\_\_ of Section A)..TOTAL: 97
- 4) Number of proposals submitted:.....TOTAL: 41
- 5) Number of seminars, symposia, etc. sponsored by the unit: (See Pg. \_\_\_\_\_ of Section A).....TOTAL: 26
- 6) Amount of space currently occupied (Sq. Ft.).....TOTAL: 4723

See Appendix B-3



**APPENDIX A-1  
EXTRAMURAL RESEARCH ACTIVITY**

**Proposals Submitted 1985/86**

<b>Principal Investigator</b>	<b>Agency</b>	<b>Title</b>	<b>\$ Value</b>	<b>Period of Award</b>	<b>Status/ Funded 85/86</b>
V. Bencivenga	National Science Foundation	Proposal to NSF-NIH for Super-computer Time	-0-	06/01/86 05/31/88	Funded

Support is requested for 25 CPU hours to be applied to studying business cycles using a stochastic optimum growth model. The research, which extends previous models, aims to reconcile findings about consumption behavior with real business cycle literature.

R. Berk G. Borjas D. Messick P. Shapiro	California State Lottery	Demographic Analysis of California State Lottery	192,864	06/18/86 09/15/86	Denied
--	--------------------------	--	---------	----------------------	--------

This proposal will undertake a demographic study of the California State Lottery players, as mandated by the California State Lottery Act. The project will also apply state of the art analysis methodology to the data gathered for use in facilitating policy making and market strategy for the State Lottery Commission. The findings will be presented to the Commission and others designated by law.

W. T. Bielby D. D. Bielby	National Research Council	Pay Equity in the Mass Media: Employment of Writers in Television and Film	14,407	05/01/86 08/31/87	Pending
------------------------------	---------------------------	--	--------	----------------------	---------

Using data from the Writers Guild of America, this proposal will study how supply, demand, and cultural factors shape employment opportunities and earnings for male and female writers. Study results will be used to analyze pay equity in other industries that rely on short term contracting.

G. J. Borjas	W. E. Upjohn Institute	Immigration, Self-Selection, and the Choice of Destination: The Cases of Australia, Canada and the United States	28,360	07/01/86 06/30/87	Funded
--------------	------------------------	--	--------	----------------------	--------

This proposal will study which factors explain the choice of destination for immigrants and how that selection mechanism affects the labor market status of immigrants across receiving countries. Using the 1980-81 Census, the research will focus on Australia, Canada and the United States.

Community and Organization Research Institute

<b>Principal Investigator</b>	<b>Agency</b>	<b>Title</b>	<b>\$ Value</b>	<b>Period of Award</b>	<b>Status/ Funded 85/86</b>
G. J. Borjas	Rockefeller Foundation	<b>Trends in the Wage Differentials Between Hispanics and Non-Hispanics: 1940-1980</b>	40,998	10/01/85 09/30/87	Pending

The proposed research will analyze the behavior of the Hispanic/non-Hispanic wage differential over the 1940/1980 period, using the five Public Use Samples of the U. S. Census spanning that period.

T. F. Cooley W. R. Parke	National Science Foundation	<b>Predictive Likelihood Techniques for Econometric Models.</b>	77,353	7/01/86 6/30/87	Denied
-----------------------------	-----------------------------	---	--------	--------------------	--------

The research will apply predictive likelihood theory to a number of economic models and attempt to develop a standard theoretical basis against which other econometric prediction techniques can be judged.

H. E. Frech	Public Health Service	<b>Information and Competition Among Hospitals: A Theoretical Analysis</b>	124,269	9/01/86 8/31/88	Denied
-------------	-----------------------	--	---------	--------------------	--------

This project seeks to determine the theoretical and empirical relationships of concentration and other influences on hospital competition, pricing and costs. An analysis of reduced form models determining hospital prices and costs in cross section and pooled cross section/ time series will be conducted.

S. E. Gerber C. J. Wellen	Assoc. for Retarded Citizens of U.S.	<b>Cry Analyses of Infants with Developmental Disabilities</b>	24,992	01/01/86 12/31/86	Denied
------------------------------	--------------------------------------	--	--------	----------------------	--------

A library of recorded cries of infants who have been diagnosed with neuromotor or developmental disabilities, airway obstruction and certain diseases will be collected. High resolution analyses will be made of these recordings to determine if infant cries can be characterized for diagnostic screening.

S. E. Gerber C. J. Wellen	March of Dimes	<b>Cry Analyses of Infants with Birth Defects</b>	71,536	3/01/86 2/28/87	Denied
------------------------------	----------------	---	--------	--------------------	--------

Recordings of infants with diagnosed birth defects will be acoustically analyzed to determine if a characteristic cry can be classified for specific disorders.

S. Gerber	Public Health Service	<b>Maturation of Auditory Behavior</b>	73,067	10/01/86 09/30/87	Pending
-----------	-----------------------	--	--------	----------------------	---------

A longitudinal study of infant auditory motor behavior will be conducted and used to formulate recommendations for clinical application in assessing infant development. The auditory screening results will be determined and analyzed as a function of four variables (post-partum age, post-conceptual age, height and weight, and maternal age).

Community and Organization Research Institute

<u>Principal Investigator</u>	<u>Agency</u>	<u>Title</u>	<u>\$ Value</u>	<u>Period of Award</u>	<u>Status/ Funded 85/86</u>
S. Gerber C. Wellen	Public Health Service	Acoustical Analyses of Infant Cry	94,609	10/01/86 09/30/87	Pending

The objectives of this proposal are to acquire a library of recordings of infants with specific categories of diagnosed abnormalities and to identify possible acoustic parameters that may differentiate a healthy infant's cry from the cry of a high risk infant, thereby facilitating diagnostic screening of infants.

G. Hansen	National Science Foundation	Labor Markets and the Business Cycle	-0-	06/01/85 05/31/88	Funded
-----------	--------------------------------	---	-----	----------------------	--------

Support is requested for 15 CPU hours on the Cray II at the University of Minnesota to study dynamic general equilibrium models to account for business cycles in a way consistent with observed features of labor markets. Numerical methods, requiring super computer capabilities, will be used to solve the dynamic programming problem faced by the agents in the model.

R. L. Klatzky J. Pellegrino S. Doherty	U. S. Air Force	Hand Configuration and Object Processing: An Integrated Approach	311,514	01/01/87 12/31/89	Pending
--	-----------------	--	---------	----------------------	---------

This research will develop and empirically support a theoretical model of the configuring of the human hand for functional interaction with objects. The relationship between hand configuring and both lower-level visual perception and higher-level conceptual representation of objects and their functions will be studied.

R. L. Klatzky J. Pellegrino	U. S. Army	Hand Configuration and Object Processing: An Integrated Approach	266,246	01/01/86 12/31/86	Withdrawn
--------------------------------	------------	--	---------	----------------------	-----------

See above for description of proposed research.

R. L. Klatzky	U. S. Navy	Object Exploration and Recognition by Humans and Machines	538,200	05/01/86 06/30/89	Funded 538,200
---------------	------------	---	---------	----------------------	-------------------

This research, combining human behavioral studies and robotic technology, will develop a general model of object apprehension and recognition through haptic exploration. The findings will provide significant information for understanding both the human perceptual/cognitive system and robotic technology.

Community and Organization Research Institute

<b>Principal Investigator</b>	<b>Agency</b>	<b>Title</b>	<b>\$ Value</b>	<b>Period of Award</b>	<b>Status/ Funded 85/86</b>
S. F. Leroy W. R. Parke C. Gilles	National Science Foundation	<b>Nonstationarity and Small-Sample Problems in Variance: Variance Bounds Estimation for Asset Prices</b>	87,786	01/01/86 06/30/89	Denied

This study aims to resolve the interpretation of observed variance-bounds estimation results through empirical consideration of evidence of nonstationarity and by development of specific forms of nonstationarity models. The research will attempt to discriminate between econometric problems and invalid economic modeling assumptions.

R. E. Mayer	National Science Foundation	<b>Improving Students' Problem Solving Skills Through Teaching Computer Programming</b>	326,971	1/01/86 12/21/88	Denied
-------------	--------------------------------	---	---------	---------------------	--------

This project will investigate the cognitive prerequisites for learning computer programming, the cognitive consequences of productive learning of programming, and whether direct instruction in prerequisite readiness skills increases programming learning capabilities.

R. E. Mayer	National Science Foundation	<b>The Nature of Mathematical Ability</b>	216,126	1/01/87 12/31/88	Pending
-------------	--------------------------------	---	---------	---------------------	---------

Students will be tested for cognitive characteristics and component skills and then trained in components of mathematical ability and in correlated cognitive processes. The goal of this project is to gain greater understanding of the nature of mathematical ability using various approaches recently developed in the cognitive psychology field.

W. Mead	UERG	<b>A Benefit Cost Analysis of Public Utility Commission Rate Regulation-The Case of Electrical Power</b>	47,633	07/01/86 06/30/88	Funded
---------	------	--	--------	----------------------	--------

This study will estimate the private cost of electrical power regulation as incurred by both the Public Utility Commission and the private utilities that must comply with the regulations. The research will identify cost for electrical power generation, transmission and distribution in California, and will include the social costs and benefits of government regulation.

D. M. Messick P. Shapiro	Alfred P. Sloan Foundation	<b>Research Conference on Preference Reversals</b>	6,000	01/01/86 06/30/86	Funded 6,000
-----------------------------	-------------------------------	--	-------	----------------------	-----------------

Support is requested for a 3 day conference on the phenomenon of preference reversal and the implications preference reversal has on behavioral economics and experimental cognitive psychology. Fifteen participants will attend the conference and original papers will be presented on the subject.

Community and Organization Research Institute

<u>Principal Investigator</u>	<u>Agency</u>	<u>Title</u>	<u>\$ Value</u>	<u>Period of Award</u>	<u>Status/ Funded 85/86</u>
-------------------------------	---------------	--------------	-----------------	------------------------	-----------------------------

W. R. Parke T. F. Cooley	National Science Foundation	Monte Carlo Research into Pre- dictive Likelihood Techniques	-0-	6/1/86 5/31/86	Funded
-----------------------------	--------------------------------	---	-----	-------------------	--------

This project will apply Monte Carlo integration techniques to a numerical study of several predictive likelihood applications. This research will extend preliminary numerical evaluation of this technique in the context of several econometric forecasting problems.

J. Pellegrino	Univ. of Washington	Computer Based Assessment of Complex Cognitive Abilities	443,852	02/13/86 02/12/87	Funded 443,852
---------------	------------------------	---	---------	----------------------	-------------------

This proposal requests a subcontract with the University of Washington to conduct work on the development of computer-based tests of complex cognitive performances. Work to be performed at UCSB will include studying performance in spatial orientation, orientation and spatial-visual reasoning, motor and spatial-visual reasoning, orientation and motor response, orientation and verbal command complexity and general vs. specific management abilities.

L. Phillips H. L. Votey	National Science Foundation	The Law, Economic Opportunities and the Social Environment: Effects of Criminal Career Choices in the Transition from Youth to Adult	60,174	07/17/86 07/31/88	Funded
----------------------------	--------------------------------	---	--------	----------------------	--------

This proposal will extend and refine previous research on the effect contact with the criminal justice system has on the criminality of youth and young adults. Methodology will consist of following a hierarchical process of hypothesis testing with the objective of generating integrated models from which alternative explanations for changing criminality can be tested.

L. Phillips H. L. Votey	National Institute of Justice	Fear and the Unequal Burden of Crime on the Elderly	48,276	07/01/86 06/30/87	Pending
----------------------------	----------------------------------	--	--------	----------------------	---------

The goal of this research is to develop a measure of the fear of crime that the elderly bear. The regressive nature of criminal victimization analyzed as a tax of income on the elderly will be determined and studied.

L. Phillips H. L. Votey	AARP Andrus Foundation	Fear and the Unequal Burden of Crime on the Elderly	39,488	01/01/87 12/31/87	Denied
----------------------------	---------------------------	--	--------	----------------------	--------

See above for description of proposed research.

Community and Organization Research Institute

Principal Investigator	Agency	Title	\$ Value	Period of Award	Status/ Funded 85/86
L. Phillips H. L. Votey	National Institute of Justice	<b>The Development and Testing of Integrated General Theoretical Model of Criminal Behavior of Youth</b>	276,933	07/01/86 06/30/88	Pending

By refining and testing a previously developed theory of criminal behavior, this proposal will integrate deterrence effects using the utilitarian approach to analyzing decision making. The data for empirical validation of the theory will be from the National Longitudinal Survey's Youth Cohort.

J. K. Sengupta	National Science Foundation	<b>Efficiency Analysis in Non-market Decision Systems Through Stochastic Economic Modeling</b>	105,721	07/01/86 06/30/88	Denied
----------------	--------------------------------	--	---------	----------------------	--------

This proposal will critically evaluate the nonparametric productivity measurement theory and the parametric approach to estimating the production frontier. The research will develop stochastic procedures for efficiency measurement methods which will be used in evaluating public education efficiency on the basis of both actual and simulated data.

J. K. Sengupta	National Science Foundation	<b>Data Envelopment Analysis: Uses and Extensions in Stochastic Framework</b>	138,124	07/01/86 06/30/88	Pending
----------------	--------------------------------	---	---------	----------------------	---------

The project's objectives are to generalize the data envelopment analysis (DEA) for measuring efficiency of decision making units for stochastic variations of inputs and outputs, and to integrate two approaches of efficiency evaluation. This research will be carried out both theoretically and empirically and aims to facilitate evaluative techniques of efficiency and public sector management accountability.

P. Shapiro D. Rubinfeld	National Science Foundation	<b>The Demand for Public and Private Education</b>	70,457	07/01/86 06/30/87	Denied
----------------------------	--------------------------------	--	--------	----------------------	--------

This research, an extension of previous work on the use of micro data, will focus on demand estimation for local public schooling when community choice is endogenous. A pilot study of public and private schools within one jurisdiction will be used to evaluate the relationship between expenditure and output and the implication this relationship has for demand estimation.

Community and Organization Research Institute

Principal Investigator	Agency	Title	\$ Value	Period of Award	Status/ Funded 85/86
------------------------	--------	-------	----------	-----------------	----------------------

T.R. Smith D. Peuquet	NASA	<b>Knowledge Based Engineering for Data Base Management and Use</b>	70,500	02/01/86 10/31/86	Funded 70,400
--------------------------	------	---	--------	----------------------	------------------

This project will be the final phase in the development of a knowledge-based geographic information system (GIRLS). This functional system is designed as a basic tool so that users in different knowledge domains may tailor the system to their own requirements.

T. R. Smith R. Dubayah	NASA	<b>Constructing Geographic Expert Systems with Learning Capabilities</b>	18,000	07/01/86 06/30/87	Funded
---------------------------	------	--	--------	----------------------	--------

The research will focus on the problems of spatial knowledge representation, spatial reasoning procedures of GES and the problems of knowledge transfer and acquisition. The objective is to develop and implement a knowledge-based system designed for natural resource analysis.

T. R. Smith	UC San Diego	<b>Integrating Image Processing Capabilities into a Knowledge Based Geographical Information System</b>	10,000	07/01/86 06/30/87	Funded
-------------	--------------	---	--------	----------------------	--------

Support is requested for 2 graduate students to assist the principal investigator in designing and commencing the implementation of a knowledge-based GIS. Generation of a set of proposals to complete this implementation is the main goal of this research.

J. Sonstelie	National Science Foundation	<b>The Streetcar and Residential Location in Nineteenth Century Philadelphia</b>	55,919	07/01/86 06/30/87	Pending
--------------	--------------------------------	--	--------	----------------------	---------

The theory that a new mode of commuting may cause a movement of upper income households from urban residential locations to distant suburban areas will be tested. Residential location data on Philadelphia during the period when the horse-drawn streetcar was introduced will be analyzed to test whether the hypothesized residential location change occurred.

M. Weatherford	National Science Foundation	<b>Comparative Research on Presi- dential Leadership in Economic Policymaking</b>	152,921	01/01/86 06/30/87	Denied
----------------	--------------------------------	---	---------	----------------------	--------

A comparative case study approach on selected economic policies of post-war presidential administrations will be conducted to test a model of the economic policy process.

Community and Organization Research Institute

Principal Investigator	Agency	Title	\$ Value	Period of Award	Status/ Funded 85/86
------------------------	--------	-------	----------	-----------------	-------------------------

R. L. Williams	Public Health Service	<b>An Automated Perinatal Information System</b>	136,632	01/01/86 12/31/86	Funded 136,632
----------------	-----------------------	--	---------	----------------------	-------------------

Automated Vital Statistics System (AVSS) has been developed for use in California hospitals. Data is collected on pregnancy and labor and delivery so that the sources of poor perinatal outcomes can be identified. The program is expanding to include other states.

R. L. Williams	CA Health and Welfare Agency	<b>AVSS Training and Consulting and Consulting Support</b>	79,444	11/01/85 06/30/86	Funded 68,142
----------------	------------------------------	--	--------	----------------------	------------------

This project will provide the necessary personnel and consulting services to local registrars of births and deaths in implementing and operating AVSS.

R. L. Williams	CA Health and Welfare Agency	<b>Implementation of Automatic Census Tracting in CA</b>	70,194	05/15/85 10/31/86	Funded 49,402
----------------	------------------------------	--	--------	----------------------	------------------

This project will further develop automated coding of census tracts and census place as part of AVSS and expand AVSS/CT to other health districts implementing AVSS.

R. L. Williams	CA Health and Welfare Agency	<b>BKK Area Maternal and Child Health Data Base Study</b>	5,469	12/01/85 03/31/86	Funded 5,469
----------------	------------------------------	---	-------	----------------------	-----------------

The project will develop census-tract/area-specific values for selected regions in Los Angeles County utilizing the 1978 through 1982 California Birth Cohort Data for Several Reproductive Outcomes.

R. L. Williams	CA Health and Welfare Agency	<b>Maternal and Child Health Data Base: Development, Application, and Dissemination</b>	372,400	07/01/85 06/30/86	Funded 372,400
----------------	------------------------------	---	---------	----------------------	-------------------

This project will maintain, augment and update the Maternal and Child Health Data Base (MCHDB) for use in assessing perinatal care in California. It will also initiate conversion of California district health departments to the Automated Vital Statistic System (AVSS) to increase accuracy and timeliness of the MCHDB.

R. L. Williams	CA Health and Welfare Agency	<b>Maternal and Child Health Data Base: Application and Dissemination</b>	324,800	07/01/86 06/30/87	Pending
----------------	------------------------------	---	---------	----------------------	---------

Funding will be provided for continued development and expansion of the Maternal and Child Health Data project.



Community and Organization Research Institute

<u>Principal Investigator</u>	<u>Agency</u>	<u>Title</u>	<u>\$ Value</u>	<u>Period of Award</u>	<u>Status/ Funded 85/86</u>
R. L. Williams	CA Health and Welfare Agency	Maternal and Child Health Data Base: Application and Dissemination	25,000	07/01/85 08/31/86	Pending

Funding will be provided for the continuation and expansion of the Maternal and Child Health Data project.

---

TOTAL EXTRAMURAL PROPOSALS SUBMITTED 1985/86:	\$4,508,678
EXTRAMURAL PROPOSALS FUNDED:	\$1,601,664
EXTRAMURAL PROPOSALS SUBMITTED 1985/86 AND FUNDED 1985/86:	\$1,437,497
EXTRAMURAL PROPOSALS SUBMITTED 1985/86 AND FUNDED 1986/87:	\$ 164,167

**APPENDIX A-2  
INTRAMURAL RESEARCH ACTIVITY**

<u>Principal Investigator</u>	<u>Agency</u>	<u>Title</u>	<u>Total \$ Funded Value</u>	<u>85/86</u>
T. Cooley P. Shapiro H. Votey	Vice Chanc.'s Urgent Needs Fund	Economic Theory Workshop	10,800	10,800
D. Messick P. Shapiro	Vice Chancellor's Urgent Needs Fund	Decision Science Program	7,500	7,500
S. Fisher	Instructional Development	Course Preparation	975	975
D. Messick	Opportunity Funds	Committee on Research Research Conference on Preference Reversals	6,000	6,000
S. Doherty J. Pellegrino T. Smith	ORDA	Center for the Study of Spatial Cognition and Performance (CSSCAP)	22,500	22,500
S. Doherty J. Pellegrino T. Smith	Urgent Needs Fund	CSSCAP	12,500	12,500
S. Doherty J. Pellegrino T. Smith	Acad. Senate Fund	CSSCAP	15,000	15,000
W. Mead	UERG	Supply Options for Electrical Power	7,990	7,990
CORI	ORDA	One Time Needs Office Equipment	1,896	1,896
CORI	ORDA	One Time Needs Computer Equipment	3,500	3,500
D. Morgan	ORDA	Travel to San Francisco for American Geophysical Union Meeting	125	125
J. Cronshaw	ORDA	Phloem Transport Conference	2,500	2,500
W. Mead	ORDA	Travel to Washington	500	500
<b>TOTAL</b>			<b>\$91,786</b>	

## APPENDIX B-1

## 1-A) UCSB Academic staff engaged in research

## a. Faculty

<u>Name</u>	<u>Department</u>	<u>Funding Agency</u>
Bielby, D.	Sociology	NSF
Bielby, W. T.	Sociology	NSF
Botkin, D.	Environmental Studies	CA Dept. of Fish & Game
Borjas, G.	Economics	Upjohn Foundation
Caswell, M.	Economics	WRS
Cronshaw, J.	Biological Sciences	NSF, USDA, DOE
Estes, J.	Geography	NSF
Fisher, S.	Sociology	Instructional Development
Fleming, R.	History	NEF
Hollister, C. W.	History	NEH
Klatzky, R.	Psychology	CSSCAP
Mead, W. J.	Economics	UERG, WRC
Melack, J.	Marine Science Institute	CA Dept. of Fish & Game
Messick, D.	Psychology	Sloan Foundation
Pellegino, J.	Psychology and Education	University of Washington
Peuquet, D. J.	Geography	USGS, NSF
Phillips, L.	Economics	NSF
Shapiro, P.	Economics	NSF, USDJ
Smith, T. R.	Geography and Computer Science	NSF, USGS
Votey, H. L.	Economics	NSF

## b. Professional Researchers

Williams, R. L.	CORI	CA Dept. of Health, NIH
-----------------	------	-------------------------

## c. Postgraduate Researchers

Agarwal, P. K.	Computer Science	NASA, NSF
Chow, K. P.	Computer Science	NASA
Doherty, S.	Education	CSSCAP
Graves, G.	History	NEH
Lathrop, R. L.	Economics	WRC
Pazner, M.	Geography	NASA

## d. Specialists

Clingman, E. J.	CORI	CA Department of Health
Fleming, R.	History	NEH
Mack, K.	History	NEH
Phibbs, C.	CORI	CA Department of Health
Rust, F. P.	CORI	CA Department of Health
Rust, K.	CORI	CA Department of Health

**e. Graduates**

Abate, R. J.	Computer Science	NASA
Alderton, D. L.	Computer Science	NASA
Azar, E.	Computer Science	NASA
Burnett, R.	Economics	NSF, USDJ
Denning, M.	Economics	UERG
Dubaya, R.	Geography	NASA
Gopal, S.	Geography	CSSCAP
Joglekar, U.	Computer Science	NASA
Liu, J.	Computer Science	NASA
McCloskey, B.	Computer Science	CSSCAP
McDonald, T.	Psychology	CSSCAP, Univ. of Washington
Paddon, J.	Geography	NASA
Riccioni, M.	Psychology	Decision Science
Ruud, M.	History	
Vogt-Nilsen, K.	Economics	NSF, USDJ
Whitacre, M.	History	NEH

**f. Undergraduates**

Andre, K.	Computer Science	CSSCAP
Doyle, J.	Computer Science	CA Dept. of Health
Frakes, R.	History	NEH
Kargard, B.	History	NEH
Lopez, V.	History	NEH
Millhoff, T.	Economics	Decision Science
Samuelson, C. D.	Psychology	Decision Science
Terchun, T.	Economics	NSF
Tran-Viet, T.	Chemistry	CA Dept. of Health
Von Meister, K.	Sociology	Instructional Development

**1-B) Participation from other campuses, institutions, industry, and the community**

**a. Researchers**

**Faculty**

Bergstrom, T., Professor of Economics, University of Michigan, Co-Principal Investigator on Grant No. NSF SES-84-09045

Cahil, T. A., Crocker Nuclear Laboratory, UC Davis, Principal Investigator on a grant from the California Department of Fish and Game

Jehl, J. R., Jr., Hubbs Marine Research Institute, San Diego, CA, on a grant from the California Department of Fish and Game.

Lucas, G., Professor of Biology, UC Davis, Co-Principal Investigator on the Phloem Transport Conference, U. S. Department of Agriculture

Rubinfeld, D., Professor of Law and Economics, UC Berkeley, Co-Principal Investigator, on Grant No. NSF SES84-09045

Stine, S., Department of Geography, UC Berkeley, on a grant from the California Department of Fish and Game

Winkler, D. W., Division of Biological Sciences, Cornell University, on a grant from the California Department of Fish and Game.

**Visiting Researchers**

Roberts, J., Assistant Research Economics, University of Southern California on Grant No. NSF SES-84-09045

Yang, Shi-Ren, Institute for Remote Sensing Applications, Chinese Academy of Science, on Grant No. NASA NCC2-359.

**Graduates**

Church, J. R., Research Assistant, UC Berkeley, on Grant No. NSF SES-84-09045.

**b. Seminar Speakers**

**Cognitive Science:** R. Klatzky, J. Pellegrino, T. Smith, Directors

Anderson, James, Brown University

Fuhrer, Urs, Weiss National Science Foundation

Pick, Herbert L., Jr., University of Minnesota

Schwartz, J., Courant Institute

Siegler, Robert S.

Arbib, Michael A., University of Massachusetts

Kanerva, Pentti, Ames Research Center

Rips, Lance, University of Chicago

Sharir, Micha, NYU & Tel Aviv University

Carnegie-Mellon University

**Economic Theory:** T. Cooley, D. Berk, Directors

Border, Kim, California Institute of Technology

Fusselman, J., University of Chicago

Heiner, Ronald, Brigham Young University

Mirman, Leonard, University of Illinois

Novshek, William, Stanford University

Weber, Shlomo, University of Toronto

Donaldson, John, Columbia University

Guasch, Louis, UC San Diego

Jones, Larry E., Northwestern University

Morgan, Peter, University of Western Ontario

Sutton, John, London School of Economics

Yannellis, N., University of Minnesota

**c. Panel Members**

**Mono Lake Project:** D. Botkin and H. L. Votey, Directors

Edmondson, W. T., Department of Zoology, University of Washington

Everett, Lorne, Hydrologist, Natural Resources Program, Kaman Tempo

Patten, Duncan T., Center for the Environment, Arizona State University

Wiens, John A., Department of Biology, University of New Mexico

## d. Conference Speakers

International Conference on Phloem Transport August 18-23, 1985

- Alfieri, F, CA State University, Long Beach  
 Baker, D. A., Wye College  
 Bennett, UC Davis  
 Bonnemain, J. L., Station Biol. de Beau Site  
 Bridges, I. G., Imperial Chemical Industries  
 Britz, S. J., Utah State University  
 Chatterton, N. Jerry, Utah State University  
 Cho, Bong-Heuy, University of Iowa  
 Christy, A. L., Monsanto Agricultural Products  
 Cronshaw, James, UC Santa Barbara  
 Damon, Sue, UC Davis  
 Derr, William F., CA State University, Chino  
 DuPont, Frances, USDA  
 Essiamah, Sam K., University of Goettingen  
 Felker, Fred, US Department of Agriculture  
 Franceschi, V., Washinton State University  
 Geiger, D., University of Dayton  
 Gifford, R. M., CSIRO  
 Gordon, A. J., Grassland Research Insitute  
 Grossman, Yaffa, UC Davis  
 Hall, J. L., The University (England)  
 Hayashi, H., University of Tokyo  
 Hendrix, John E., Colorado State University  
 Hewitt, John D., UC Davis  
 Hitz, W. D., Du Pont de Nemours & Co.  
 Hoddinott, J., University of Alberta  
 Honegger, Joy, Monsanto Company  
 Hsu, Francis, Shell Development Company  
 Humphreys, Thomas E., University of Florida  
 Jachetta, J. J., Union Carbide Company  
 Jenner, C. F., Waite Agri. Research Inst.  
 Kaback, H. R., Roche Institute  
 Kang, Tian-Min, UC Berkeley  
 Kleier, Daniel, Shell Development Company  
 Kochian, Leon, UC Davis  
 Lackney, Vince, University of Iowa  
 Lang, A., Scientific and Industrial Research  
 Lee, Roger, Memorial University  
 Lin, W., Du Pont de Nemours & Co.  
 Madore, Monica, UC Davis  
 McNairn, Robert, CA State University, Chico  
 Mooney, H. A., Stanford University  
 O'Neal, Denny, Basf Wyandotte  
 Oparka, Karl, Scottish Crop Research Inst.  
 Orr, Peter, Psizer Plant Genetic Dept.  
 Pate, J. S., Univ. of W. Australia  
 Pesacreta, T. C., Harvard Univ.  
 Porter, Clark, Monsanto Co.  
 Rodaway, Shirley, American Cyanamid Co.  
 Sabnis, Dinkar, Univ. of Aberdeen  
 Schmalstig, Judy, Du Pont de Nemours & Co.  
 Alosi, M. Carol, UC Berkeley  
 Barnabas, A.D., University of Texas  
 Blechschmidt, Sabine, Institut fur Forstbotanik  
 Bookardt, R., Forstbotanisches Institut  
 Briskin, D. B., Utah State University  
 Brun, W., University of Minnesota  
 Chino, Mitsuo, University of Tokyo  
 Christ, Rudolf, CIBA-Geigy  
 Crawford, C. G., USDA  
 Cseke, Csaba, UC Berkeley  
 Delrot, S., Station Biol. de Beau-Site  
 Doehlert, D. , USDA  
 Eschrich, W., Forstbotan. Institut  
 Evert, R. F., University of Wisconsin  
 Fondy, B. R., Seton Hill College  
 Fromm, Jorg, Universitat Gottingen  
 Giaquinta, R. T., Du Pont de Nemours & Co.  
 Goeschl, John D., Texas A&M University  
 Griffith, Steve, Agronomy & Plant Genetics  
 Grusak, UC Davis  
 Haworth, P., Zoecon Corporation  
 Hendrix, Donald L., USDA  
 Hess, Dan, Zoecon Corporation  
 Heyser, Rosemarie, Forstbotanisches Institut  
 Ho, L., Grasslands Crops Research Institute  
 Hoefert, Lynn, US Department of Agriculture  
 Housley, Thomas, Perdue University  
 Huber, S. C., US Department of Agriculture  
 Jablonski, Leanne M., University of Dayton  
 Jacobsen, Karin Ruth, Forstbotanisches Institut  
 Johnson, R. P. C., Aberdeen University  
 Kaiser, George, Univ. Wurzburg  
 Keifer, David, FMC Corporation  
 Koch, K. E., University of Florida  
 Komor, E., Universitat Bayreuth  
 Lamoreaux, Robert, Zoecon Corporation  
 Le Barron, Homer M., CIBA Geigy  
 Lichtner, F. T., E.I. Du Pont & Co.  
 Lucas, W. J., UC Davis  
 Marezki, Andrew  
 Miksche, Jerome P., USDA  
 Murphy, Ricardo, Trinity College  
 Offler, Christina E., University of Newcastle  
 Oross, J., UC Davis  
 Osteryoung, Katherine, UC Davis  
 Patrick, J. W., Univ. of Newcastle  
 Porter, Gregory A., Pennsylvania State Univ.  
 Robertson, W., NSF  
 Russin, Bill, Univ. of Wisconsin  
 Sage, Tammy, UC Davis  
 Schmitt, Mark, Monsanto Agri. Products

Schulz, Alexander, Univ. Heidelberg  
Secor, Jacob, Dow Chemical Corp.  
Sicher, Richard, Beltsville Agri. Research Ctr.  
Sjolund, Richard, Univ. of Iowa  
Spanswick, R. M., Cornell Univ.  
Stranz, David D., Shell Development Co.  
Thomas, Bruce R., Calgene Inc.  
Tollenaar, M. M., Univ. of Guelph  
Van Campfort, Chris, FMS Corporation  
Walsh, Terence, Dow Chemical Corp.  
Wilson, C., UC Davis  
Wyse, R. E., USDA

Schussler, Jeff, Agronomy & Plant Genetics  
Shannon, J. C., Pennsylvania State Univ.  
Simmons, S. R., Agronomy & Plant Genetics  
Sovnick, S., Univ. of Cincinnati  
Stitt, M., Pflanzenphysiol Institut  
Thom, Margaret,  
Thorne, J. H., Du Pont de Nemours & Co.  
Turgeon, R., Cornell Univ.  
Vruegdenhill, D., Agricultural Univ.  
Warmbrodt, Robert D., Univ. of Maryland  
Wolswinkel, P., Botanisch Laboratorim  
Zamski, Eli, Faculty of Agriculture

**Decision Science Conference on Preference Reversals** February 10-12, 1986

Bar-Hellel, H., Hebrew University  
Goldstein, William, University of Chicago  
Kahneman, Daniel, Univ. of British Columbia  
MacCrimmon, Kenneth, U. of British Columbia  
Slovic, Paul, University of Oregon  
Thaler, Richard, Cornell University

Coursey, Don L., University of Wyoming  
Johnson, Eric, Carnegie Institute  
Lichtenstein, Sarah, Univ. of Oregon  
Plott, Charles, Cal Tech University  
Smith, Vernon, University of Arizona  
Tversky, Amos, Stanford University

**APPENDIX B-2A**  
**Employees on University Funds**

<b>CORI</b>	<u>% FTE</u>
Votey, H. L., Director	.40
Shapiro, P., Associate Director	.13
Smith, T. R., Associate Director	.13
<b>Staff:</b>	
Hagen, B. R., Administrative Assistant (Career)	1.00
Cornet, J., Principal Clerk (Career)	1.00
Dandona, J., Word Processing Specialist (Career)	.42
Hanson, B., Word Processing Specialist (Career)	.08
McDaniel, I., Principal Clerk (Career)	.03
<b>Center for the Study of Spatial Cognition and Performance</b>	
Klatzky, R., Associate Director	
Pellegrino, J. W., Associate Director	
Smith, T. R., Associate Director	
Doherty, S., Postgraduate Research Psychologist (Career) (7/1/85 - 6/30/86)	.95
<b>Students:</b>	
Andre, K., Assistant, 9/1/85-12/31/85	.04
Dubayah, R., Research Assistant, 9/1/85-10/1/85	.01
Gopel, S., Research Assistant, 12/1/85-1/31/86	.01
McCloskey, B., Research Assistant, 7/1/85-8/31/85	.08
Joklekar, U., Research Assistant, 10/1/85-1/31/86	.08
<b>Center for the Study of Decision Science</b>	
Messick, D. M., Associate Director	
Shapiro, P., Associate Director	
<b>Students:</b>	
Millhoff, T. A., Research Assistant, 3/1/86-6/30/86	.01
Riccioni, M., Research Assistant, 9/1/85-6/30/86	.17
Samuelson, C. D., Lab Assistant, 5/1/86-6/30/86	.01
<b>Instructional Development</b>	
Fisher, S., Research Sociologist	
<b>Students:</b>	
Von Meister, K. N., 11/1/85-6/30/86	.07



**APPENDIX B-2B**  
**Employees on Non-University Funds**

<b>California Department of Fish and Game</b>	<b><u>% FTE</u></b>
Botkin, D.B., Research Environmentalist	.06
<b>Staff:</b>	
Johnson, C. L., Word Processing Specialist, 10/1/85-1/1/86	.01
<b>California Department of Health Services 85-141</b>	
Williams, R. L., Associate Research Economist	
<b>Professionals:</b>	
Clingman, E. J., Associate Specialist, 7/1/85-11/30/85	.20
Phibbs, C., Associate Specialist, 7/1/85-6/30/86	.50
Rust, F. P., Associate Specialist, 11/1/85-6/30/86	.30
Rust, K., Assistant Specialist, 7/1/85-6/30/86	1.00
<b>Staff:</b>	
Marinko, J., Programmer, 7/1/85-6/30/86	1.00
<b>Students:</b>	
Doyle, J., Assistant, 10/10/85-6/13/86	.08
Tran-Viet, T., Assistant, 7/1/85-10/31/85	.04
<b>California Department of Health Services 85-86786</b>	
Williams, R. L., Associate Research Economist	
<b>Professionals:</b>	
Falkenberg, R. H., Sr., Administrative Analyst, 11/1/85-6/30/86	.62
Morales-Falkenberg, E., Administrative Analyst, 5/1/86-6/30/86	.17
Rust, F., Associate Specialist, 4/1/86-6/30/86	.12
<b>California Department of Health Services 85-86519</b>	
Williams, R. L., Associate Research Economist	
<b>Professionals:</b>	
Rust, F., Associate Specialist, 2/1/86-3/3/86	.08
<b>National Institute of Health Services MCJ 063211</b>	
Williams, R. L., Associate Research Economist	1.00
<b>Staff:</b>	
Chen, P., Programmer, 7/1/85-6/30/86	1.00
<b>National Science Foundation SES84-00799</b>	
Smith, T., Research Geographer and Computer Scientist	.11
Estes, J., Research Geographer	.06
Peuquet, D., Assistant Research Geographer	.08
<b>Students:</b>	
Agarwal, P., Research Assistant, 7/1/85-8/31/85	.10
Joglekar, U. D., Research Assistant, 7/1/85-9/30/85	.17

Community and Organization Research Institute

<b>National Science Foundation SES84-12860</b>	<b>% FTE</b>
Phillips, L., Research Economist	.11
Votey, H. L., Research Economist	.18
<b>National Science Foundation SES84-09045</b>	
Shapiro, P., Research Economist	.22
Bergstrom, T., Research Economist	.22
Rubinfeld, D., Research Economist	.11
<b>Students:</b>	
Burnett, R., Assistant 2/1/85-6/30/86	.04
Church, J., Research Assistant, 6/15/85-12/30/85	.01
Vogt-Nilsen, K., Research Assistant, 1/1/86-5/31/86	.10
Terchun, T., Assistant, 4/1/86-6/13/86	
<b>National Science Foundation SES85-10172</b>	
Bielby, W. T., Research Sociologist	.11
Bielby, D., Associate Research Sociologist	.11
<b>USDJ 841 JCX-0033</b>	
Votey, H. L., Research Economist	.08
Shapiro, P., Research Economist	.11
<b>Students:</b>	
Burnett, R., Assistant, 7/1/85-1/31/86	.18
Vogt-Nilsen, K., Research Assistant, 12/1/85-1/31/86	.09
<b>NEH RT 20213</b>	
Hollister, C. W., Research Historian	
<b>Professionals:</b>	
Fleming, R., Associate Specialist, 10/1/85-6/30/86	.28
Mack, K., Assistant Sepcialist, 10/1/85-6/30/86	.19
<b>Students:</b>	
Kargard, B., Assistant, 7/1/85-12/30/85	.03
Lopez, V., Assistant, 10/1/85-4/30/86	.08
Whitacre, M. M., Research Assistant, 11/1/85-12/31/86	.05
<b>NASA NCC2-359</b>	
Smith, T. R., Research Geographer and Computer Scientist	.11
Peuquet, D., Assistant Research Geographer	.05
<b>Students:</b>	
Agarwal, P.K., Postgraduate Research, 8/1/85-6/30/86	.82
Azar, E., Research Assistant, 8/1/85-9/30/85	.10
Chow, K. P., Postgraduate Research, 7/1/85-12/31/85	.30
Joglekar, U. D., Research Assistant, 9/1/85-2/28/86	.20
Menon, S., Research Assistant, 7/1/85-9/30/85	.71
Paddon, J., Research Assistant, 7/1/85-9/30/85	.09
Pazner, M., Postgraduate Researcher, 9/1/85-9/30/85	.04
Yang, S. R., Visting Research Geographer, 10/1/85-3/31/86	.08

Community and Organization Research Institute

<b>Water Resources Center W-661</b>	<u>% FTE</u>
Caswell, M., Assistant Research Economist	.22
<b>Professionals:</b>	
Lathrop, R. L., Postgraduate Researcher, 10/1/85-6/30/86	.40
<b>UCSB Foundation Domesday Book Project</b>	
Hollister, C. W., Research Historian	
<b>Professionals:</b>	
Fleming, R., Associate Specialist, 7/1/85-9/30/85	.23
Mack, K., Postgraduate Researcher, 7/1/85-9/30/85	.23
Graves, G., Postgraduate Researcher, 10/1/85-6/30/86	.38
<b>Students:</b>	
Frakes, R. M., Assistant, 1/1/86-3/31/86	.12
Ruud, M., Research Assistant, 6/15/86-9/21/86	.03
<b>University of Washington</b>	
Pellegrino, J. W., Research Educator and Psychologist	
<b>Students:</b>	
Abate, R. J., Research Assistant, 7/1/85-2/28/86	.33
Alderton, D. L., Research Assistant, 7/1/85-12/31/85	.25
McDonald, T., Research Assistant, 7/1/85-9/30/85	.13
<b>Universitywide Energy Research Group</b>	
Mead, W. J., Research Economist	.11
<b>Students:</b>	
Denning, M. A., Research Assistant, 7/1/85-6/30/86	.40
<b>NASA NGT 805</b>	
Smith, T. R., Research Computer Scientist and Geographer	
<b>Students:</b>	
Dubayah, R., Graduate, Fellowship recipient	

**CURRENT SPACE ASSIGNMENTS (continued)**

<b>North Hall</b>			<b>Square Feet</b>
2208	Conference Room	<b>CORI/Economics Department</b> Small Conference Room	437
2212	Conference Room	<b>CORI/Economics Department</b> Large Conference Room	607
2213	Computer Room	<b>CSSCAP</b> McDonald, T., Research Assistant Joglekar, U., Research Assistant McCloskey, B., Research Assistant Andre, K., Assistant	??
2214C	Computer Room	<b>California Department of Health Services</b> William, R. L., Associate Research Economist	192
<b>Ellison Hall</b>			<b>Square Feet</b>
2704	Research Office	<b>NEH Domesday Book - Hollister, W.</b> Fleming, R., Associate Specialist Lopez, V., Assistant	120
5805	Research Office	<b>NEH Domesday Book - Hollister, W.</b> Mack, K., Assistant Specialist Whitacre, M., Research Assistant Kaargard, B., Assistant	120

## APPENDIX B-3

## CURRENT SPACE ASSIGNMENTS

North Hall			Square Feet
1013	Research Office	Schniepp, M., Assistant Research Economist	150
1015	Research Office	NSF - Votey, H. L./Phillips, L.	150
1017	Research Office	Water Resources Center - Mercer, L./Morgan, D.	150
2201	Admin. Office	CORI Hagen, B., Administrative Assistant; Cornet, J., Principal Clerk	345
2201A	Research Office	California Department of Health Services Williams, R. L., Associate Research Economist	138
2202	Word Processing Facility	CORI Dandona, J., Word Processing Specialist	247
2204	Admin. Office	Center for the Study of Spatial Cognition and Performance (CSSCAP) Klatzky, R., (Psychology) Pellegrino, J. (Education) Smith, T. R. (Geography and Computer Science) Doherty, S., Postgraduate Research Psychologist McIntosh, J., Senior Typist Clerk	264
2205	Research Office	NSF and-USDJ - Shapiro, P.	138
2206	Conference Room	CORI/Economics Department Pellish Room	345
2207	Research Office	California Department of Health Services National Institute of Health - Williams, R. L. Chen, P., Programmer -NEH Marinko, J., Programmer - CDHS	276
2209	Research Space Modules	CORI Rust, F., Specialist (Williams, CDHS) Tran-Viet, T., Clerk (Williams, CDHS) Rust, K., Specialist (Williams, CDHS) Burnett, R., Research Assistant (Shapiro/Votey, NSF/NIJ) Doyle, J., Assistant (Williams, CDHS) Denning, M., Research Assistant (Mead, UERG)	437