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)
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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 1 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

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<td><strong>A. Extramural Funds</strong></td>
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|                |       |       |       |       |       |       |
| **B. University Funds** |       |       |       |       |       |       |
| 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.)

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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 Dome day 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 Moro 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 Pequen 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 Dandora, 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 has 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 meeting 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. Fakes, 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
Prof'l: 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
Prof'l: 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

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 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 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 Yannelis, Professor of Economics, University of Minnesota.

April 7 "Consistent Conditional Systems in Noncooperative Game Theory." Andrew McLennan, Mathematical Sciences Research Institute, Berkeley, California.

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 Berkley; Dr. D.A. Baker, Wye College, England; Dr. A.D. Barnabas, University of Texas; Dr. A.B. Bennett, UC Davis; Dr. Sabine Bleischmidt, Institut fur Forstbotanik, West Germany; Dr. J.L. Bonnemain, Station Biologique de Beau Site, France; Dr. R. Bookardt, Universitat Gottingen, 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 Chatterson, 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. Derri, California State University at Chico; Dr. Douglas Doehlert, USDA; Dr. Frances M. Dupont, US Department of Agriculture; Dr. W. Eschrich, Universitat Gottingen, West Germany; Dr. Sam K. Essiamah, Universitat Gottingen, 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, Universitat Gottingen, 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, Universitat Wurzburg, 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, Universitat Bayreuth, West Germany; Dr. Vince Lackney, University of Iowa; Dr. Robert Lamoreaux, Zoecon Corporation; Dr. A. Lang, Physics and Engineering Laboratory, New Zealand; Dr. Homer M. Le Baron, CIBA Geigy Corporation; Dr. Roger Lee, Memorial University; Dr. F.T. Lichtner, El 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, Bast Wyandotte; Dr. Christina E. Offer, 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 Rodawy, 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. Vrugdenhil, Agricultural University, The Netherlands; Dr. Terence Walsh, Dow Chemical Company; Dr. Robert D. Warmbrot, 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


The way it was: Topical organization in elderly conversation. *Language and Communication*, 6, 1986 (with D. Boden).


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).


Men and women at work: Sex segregation and statistical discrimination. *American Journal of Sociology*, 91 (4) 1986 (with James N. Baron).


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).


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).


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


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


**Pellegrino, J.**


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


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


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


Shapiro, P.


Smith, T.


Functional invariance under spatial aggregation from continuous spatial interaction models. Geographical Analysis, 17, 1985 (with M. G. Schwab).


Votey, H. L.


Taking account of systems interactions in modeling road accident. Accident Analysis and Prevention, 18, 1986 (Special Issue on Accident Modelling).


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).


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.


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

The economic consequences of immigration (with Marta Tienda).


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 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.


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

Cost and Demand for Education. In progress.


Smith, T. R.


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).


**Votey, H. L.**


**Williams, R. L.**


**Papers Presented, Seminars and Colloquia**

**Bielby, D.**


**Bielby, W. T.**


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


Caswell, M.


Klatzky, R.

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


Mead, W. J.


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


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


"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.


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).


"Overview of Record Linkage: Theory and Practice." IMCHIS Workshop: Design and


**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.


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
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


Invited lecturer, Workshop on Modelling Complex Systems, J. 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.

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

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</table>
1a) UCSB academic staff engaged in research:

   a) Faculty  
       d) Postdoctoral  
       b) Professional Researchers  
       e) Graduate  
       c) Specialists  
       f) Undergraduates  
       g) Other (specify)  

   TOTAL 59

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

   a) Faculty  
   b1) Graduates  
   b2) Undergraduates  
   b3) Industry (designate)  

   TOTAL 15

   See Appendix B-1

2) Number of employees and FTE in unit:

   a) Employees on University Funds:

   Number FTE

   Professional  
   Technical Students  11  .75  
   Administrative  4  1.61  
   Clerical  5  2.53  

   TOTAL 20  4.89

   TOTAL NUMBER: 20
   TOTAL FTE: 4.89
b) Employees on Non-University Funds:

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<td>Technical</td>
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<tr>
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<tr>
<td>Clerical</td>
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<tr>
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**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

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Agency</th>
<th>Title</th>
<th>$ Value</th>
<th>Period of Award</th>
<th>Status/ Funded 85/86</th>
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</thead>
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<tr>
<td>V. Bencivenga</td>
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<td>Proposal to NSF-NIH for Supercomputer Time</td>
<td>-0-</td>
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<td>R. Berk</td>
<td>California State Lottery</td>
<td>Demographic Analysis of California State Lottery</td>
<td>192,864</td>
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<td>G. Borjas</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>D. Messick</td>
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<tr>
<td>P. Shapiro</td>
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</tbody>
</table>

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.

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

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        | Funded 06/30/87      |

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.
<table>
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<tr>
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<th>Agency</th>
<th>Title</th>
<th>$ Value</th>
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<tr>
<td>G. J. Borjas</td>
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<td>Trends in the Wage Differentials Between Hispanics and Non-Hispanics: 1940-1980</td>
<td>40,998</td>
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<td>T. F. Cooley W. R. Parke</td>
<td>National Science Foundation</td>
<td>Predictive Likelihood Techniques for Econometric Models.</td>
<td>77,353</td>
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<td>H. E. Frech</td>
<td>Public Health Service</td>
<td>Information and Competition Among Hospitals: A Theoretical Analysis</td>
<td>124,269</td>
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<tr>
<td>S. E. Gerber C. J. Wellen</td>
<td>Assoc. for Retarded Citizens of U.S.</td>
<td>Cry Analyses of Infants with Developmental Disabilities</td>
<td>24,992</td>
<td>01/01/86 12/31/86</td>
<td>Denied</td>
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<tr>
<td>S. E. Gerber C. J. Wellen</td>
<td>March of Dimes</td>
<td>Cry Analyses of Infants with Birth Defects</td>
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<td>S. Gerber Service</td>
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<td>73,067</td>
<td>10/01/86 09/30/87</td>
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</table>

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.

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.

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.

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.

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

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-conceptional age, height and weight, and maternal age).
S. Gerber  
C. Wellen

<table>
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<th>Agency</th>
<th>Title</th>
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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

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<td>06/01/85</td>
<td>Funded 05/31/88</td>
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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

<table>
<thead>
<tr>
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<th>Title</th>
<th>$ Value</th>
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<td>U. S. Air Force</td>
<td>Hand Configuration and Object Processing: An Integrated Approach</td>
<td>311,514</td>
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<td>Pending 12/31/89</td>
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</table>

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

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<tr>
<th>Agency</th>
<th>Title</th>
<th>$ Value</th>
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See above for description of proposed research.

R. L. Klatzky  

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<td>Object Exploration and Recognition by Humans and Machines</td>
<td>538,200</td>
<td>05/01/86</td>
<td>Funded 06/30/89 538,200</td>
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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.
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<td>A Benefit Cost Analysis of Public Utility Commission Rate Regulation-The Case of Electrical Power</td>
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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.

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.

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.

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.

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.
W. R. Parke
T. F. Cooley

**Principal Investigator**
National Science Foundation

**Agency**

Monte Carlo Research into Predictive Likelihood Techniques

**Title**

$0$

$6/1/86$

5/31/86

**Period of Award**

Funded

**Status/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

**Principal Investigator**

Computer Based Assessment of Complex Cognitive Abilities

**Agency**

$443,852$

02/13/86

02/12/87

**Title**

Fund

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

**Principal Investigator**

$60,174$

07/17/86

07/31/88

**Agency**

Fund

07/31/88

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

**Principal Investigator**

$48,276$

07/01/86

06/30/87

**Agency**

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

**Principal Investigator**

$39,488$

01/01/87

12/31/87

**Agency**

Denied

12/31/87

See above for description of proposed research.
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<th>Title</th>
<th>$ Value</th>
<th>Period of Award</th>
<th>Status/ Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Phillips H. L. Votey</td>
<td>National Institute of Justice</td>
<td>The Development and Testing of Integrated General Theoretical Model of Criminal Behavior of Youth</td>
<td>276,933</td>
<td>07/01/86 06/30/88</td>
<td>Pending</td>
</tr>
</tbody>
</table>

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 | Efficiency Analysis in Non-market Decision Systems Through Stochastic Economic Modeling | 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 | Data Envelopment Analysis: Uses and Extensions in Stochastic Framework | 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 | The Demand for Public and Private Education | 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.
<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Agency</th>
<th>Title</th>
<th>$ Value</th>
<th>Period of Award</th>
<th>Status/ Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.R. Smith</td>
<td>NASA</td>
<td>Knowledge Based Engineering for Data Base Management and Use</td>
<td>70,500</td>
<td>02/01/86</td>
<td>Funded</td>
</tr>
<tr>
<td>D. Peuquet</td>
<td></td>
<td></td>
<td></td>
<td>10/31/86</td>
<td>70,400</td>
</tr>
</tbody>
</table>

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            | NASA            | Constructing Geographic Expert Systems with Learning Capabilities | 18,000  | 07/01/86        | Funded         |
| R. Dubayah             |                 |                                                 |         | 06/30/87        |                |

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    | Integrating Image Processing Capabilities into a Knowledge Based Geographical Information System | 10,000  | 07/01/86        | Funded         |
|                       |                 |                                                 |         | 06/30/87        |                |

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 | The Streetcar and Residential Location in Nineteenth Century Philadelphia | 55,919  | 07/01/86        | Pending        |
|                       |                              |                                                 |         | 06/30/87        |                |

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 | Comparative Research on Presidential Leadership in Economic Policymaking | 152,921 | 01/01/86        | Denied         |
|                       |                              |                                                 |         | 06/30/87        |                |

A comparative case study approach on selected economic polices of post-war presidential administrations will be conducted to test a model of the economic policy process.
<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Agency</th>
<th>Title</th>
<th>$ Value</th>
<th>Period of Award</th>
<th>Status/ Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. L. Williams</td>
<td>Public Health Service</td>
<td>An Automated Perinatal Information System</td>
<td>136,632</td>
<td>01/01/86</td>
<td>Funded</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12/31/86</td>
<td>136,632</td>
</tr>
</tbody>
</table>

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.

|                        |                               |                                                      |         | 06/30/86        | 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  | Implementation of Automatic Census Tracting in CA   | 70,194  | 05/15/85        | Funded        |
|                        |                               |                                                      |         | 10/31/86        | 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  | BKK Area Maternal and Child Health Data Base Study  | 5,469   | 12/01/85        | Funded        |
|                        |                               |                                                      |         | 03/31/86        | 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  | Maternal and Child Health Data Base: Development, Application, and Dissemination | 372,400 | 07/01/85        | Funded        |
|                        |                               |                                                      |         | 06/30/86        | 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  | Maternal and Child Health Data Base: Application and Dissemination | 324,800 | 07/01/86        | Pending       |
|                        |                               |                                                      |         | 06/30/87        |               |

Funding will be provided for continued development and expansion of the Maternal and Child Health Data project.
<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Agency</th>
<th>Title</th>
<th>$ Value</th>
<th>Period of Award</th>
<th>Status/ Funded 85/86</th>
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<tr>
<td>R. L. Williams</td>
<td>CA Health and Welfare Agency</td>
<td>Maternal and Child Health Data Base: Application and Dissemination</td>
<td>25,000</td>
<td>07/01/85</td>
<td>Pending 08/31/86</td>
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</table>

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

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

1-A) UCSB Academic staff engaged in research

a. Faculty

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

b. Professional Researchers

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Williams, R. L.</td>
<td>CORI</td>
<td>CA Dept. of Health, NIH</td>
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</table>

c. Postgraduate Researchers

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<thead>
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<th>Name</th>
<th>Affiliation</th>
<th>Funding Agency</th>
</tr>
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<tbody>
<tr>
<td>Agarwal, P. K.</td>
<td>Computer Science</td>
<td>NASA, NSF</td>
</tr>
<tr>
<td>Chow, K. P.</td>
<td>Computer Science</td>
<td>NASA</td>
</tr>
<tr>
<td>Doherty, S.</td>
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<tr>
<td>Graves, G.</td>
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<tr>
<td>Lathrop, R. L.</td>
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<tr>
<td>Pazner, M.</td>
<td>Geography</td>
<td>NASA</td>
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d. Specialists

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<tr>
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<th>Funding Agency</th>
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<tr>
<td>Clingman, E. J.</td>
<td>CORI</td>
<td>CA Department of Health</td>
</tr>
<tr>
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<td>NEH</td>
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<tr>
<td>Mack, K.</td>
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<td>NEH</td>
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<tr>
<td>Phibbs, C.</td>
<td>CORI</td>
<td>CA Department of Health</td>
</tr>
<tr>
<td>Rust, F. P.</td>
<td>CORI</td>
<td>CA Department of Health</td>
</tr>
<tr>
<td>Rust, K.</td>
<td>CORI</td>
<td>CA Department of Health</td>
</tr>
</tbody>
</table>
e. Graduates

<table>
<thead>
<tr>
<th>Name</th>
<th>Field</th>
<th>Affiliation</th>
</tr>
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<tbody>
<tr>
<td>Abate, R. J.</td>
<td>Computer Science</td>
<td>NASA</td>
</tr>
<tr>
<td>Alderton, D. L.</td>
<td>Computer Science</td>
<td>NASA</td>
</tr>
<tr>
<td>Azar, E.</td>
<td>Computer Science</td>
<td>NASA</td>
</tr>
<tr>
<td>Burnett, R.</td>
<td>Economics</td>
<td>NSF, USDJ</td>
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<tr>
<td>Denning, M.</td>
<td>Economics</td>
<td>UERG</td>
</tr>
<tr>
<td>Dubaya, R.</td>
<td>Geography</td>
<td>NASA</td>
</tr>
<tr>
<td>Gopal, S.</td>
<td>Geography</td>
<td>CSSCAP</td>
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<tr>
<td>Joglekar, U.</td>
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<td>NASA</td>
</tr>
<tr>
<td>Lii, J.</td>
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<td>NASA</td>
</tr>
<tr>
<td>McCloskey, B.</td>
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<td>CSSCAP</td>
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<tr>
<td>McDonald, T.</td>
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<tr>
<td>Paddon, J.</td>
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<td>NASA</td>
</tr>
<tr>
<td>Riccioni, M.</td>
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<tr>
<td>Ruud, M.</td>
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<tr>
<td>Vogt-Nilsen, K.</td>
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<td>NSF, USDJ</td>
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<tr>
<td>Whitacre, M.</td>
<td>History</td>
<td>NEH</td>
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</table>

f. Undergraduates

<table>
<thead>
<tr>
<th>Name</th>
<th>Field</th>
<th>Affiliation</th>
</tr>
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<tbody>
<tr>
<td>Andre, K.</td>
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<td>CSSCAP</td>
</tr>
<tr>
<td>Doyle, J.</td>
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<td>CA Dept. of Health</td>
</tr>
<tr>
<td>Frakes, R.</td>
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<td>NEH</td>
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<tr>
<td>Kargard, B.</td>
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<td>NEH</td>
</tr>
<tr>
<td>Lopez, V.</td>
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<td>Millhoff, T.</td>
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<td>Decision Science</td>
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<tr>
<td>Samuelson, C. D.</td>
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<td>Decision Science</td>
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<tr>
<td>Terchun, T.</td>
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<td>NSF</td>
</tr>
<tr>
<td>Tran-Viet, T.</td>
<td>Chemistry</td>
<td>CA Dept. of Health</td>
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<tr>
<td>Von Meister, K.</td>
<td>Sociology</td>
<td>Instructional Development</td>
</tr>
</tbody>
</table>

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
Community and Organization Research Institute

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

48
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., Washington State University
Geiger, D., University of Dayton
Gifford, R. M., CSIRO
Gordon, A. J., Grassland Research Institute
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
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
P esacreta, T. C., Harvard Univ.
Porter, Clark, Monsanto Co.
Rodaway, Shirley, American Cyanamid Co.
Sabinis, Dinkar, Univ. of Aberdeen
Schmalstig, Judy, Du Pont de Nemours & Co.
Alosi, M. Carol, UC Berkeley
Barnabas, A.D., University of Texas
Bleichschmidt, 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, Forstbotanishes 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
Lucas, W. J., UC Davis
Maretzki, Andrew
Miksch, Jerome P., USDA
Murphy, Ricardo, Trinity College
Offler, Christina E., University of Newcastle
Oross, J., UC Davis
Ostergard, 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
APPENDIX B-2A
Employees on University Funds

CORI

Votey, H. L., Director .40
Shapiro, P., Associate Director .13
Smith, T. R., Associate Director .13

Staff:
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

Center for the Study of Spatial Cognition and Performance
Klatzky, R., Associate Director
Pellegrino, J. W., Associate Director
Smith, T. R., Associate Director
Doherty, S., Postgraduate Research Psychologist (Career) .95
(7/1/85 - 6/30/86)

Students:
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

Center for the Study of Decision Science
Messick, D. M., Associate Director
Shapiro, P., Associate Director

Students:
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

Instructional Development
Fisher, S., Research Sociologist

Students:
Von Meister, K. N., 11/1/85-6/30/86 .07
APPENDIX B-2B
Employees on Non-University Funds

California Department of Fish and Game
Botkin, D.B., Research Environmentalist

Staff:
Johnson, C. L., Word Processing Specialist, 10/1/85-1/1/86

California Department of Health Services 85-141
Williams, R. L., Associate Research Economist

Professionals:
Clingman, E. J., Associate Specialist, 7/1/85-11/30/85
Phibbs, C., Associate Specialist, 7/1/85-6/30/86
Rust, F. P., Associate Specialist, 11/1/85-6/30/86
Rust, K., Assistant Specialist, 7/1/85-6/30/86

Staff:
Marinko, J., Programmer, 7/1/85-6/30/86

Students:
Doyle, J., Assistant, 10/10/85-6/13/86
Tran-Viet, T., Assistant, 7/1/85-10/31/85

California Department of Health Services 85-86786
Williams, R. L., Associate Research Economist

Professionals:
Falkenberg, R. H., Sr., Administrative Analyst, 11/1/85-6/30/86
Morales-Falkenberg, E., Administrative Analyst, 5/1/86-6/30/86
Rust, F., Associate Specialist, 4/1/86-6/30/86

California Department of Health Services 85-86519
Williams, R. L., Associate Research Economist

Professionals:
Rust, F., Associate Specialist, 2/1/86-3/3/86

National Institute of Health Services MCJ 063211
Williams, R. L., Associate Research Economist

Staff:
Chen, P., Programmer, 7/1/85-6/30/86

National Science Foundation SES84-00799
Smith, T., Research Geographer and Computer Scientist
Estes, J., Research Geographer
Peuquet, D., Assistant Research Geographer

Students:
Agarwal, P., Research Assistant, 7/1/85-8/31/85
Joglekar, U. D., Research Assistant, 7/1/85-9/30/85

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\text{California Department of Fish and Game} & 0.06 \\
\text{California Department of Health Services 85-141} & 0.01 \\
\text{California Department of Health Services 85-86786} & 0.20 \\
\text{California Department of Health Services 85-86519} & 0.50 \\
\text{National Institute of Health Services MCJ 063211} & 0.30 \\
\text{National Science Foundation SES84-00799} & 1.00 \\
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Water Resources Center W-661
Caswell, M., Assistant Research Economist

Professionals:
Lathrop, R. L., Postgraduate Researcher, 10/1/85-6/30/86 .40

UCSB Foundation Domesday Book Project
Hollister, C. W., Research Historian

Professionals:
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

Students:
Frakes, R. M., Assistant, 1/1/86-3/31/86 .12
Ruud, M., Research Assistant, 6/15/86-9/21/86 .03

University of Washington
Pellegrino, J. W., Research Educator and Psychologist

Students:
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

Universitywide Energy Research Group
Mead, W. J., Research Economist

Students:
Denning, M. A., Research Assistant, 7/1/85-6/30/86 .40

NASA NGT 805
Smith, T. R., Research Computer Scientist and Geographer

Students:
Dubayah, R., Graduate, Fellowship recipient
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## APPENDIX B-3

### CURRENT SPACE ASSIGNMENTS

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<td>CORI Rust, F., Specialist (Williams, CDHS) Tran-Viet, T., Clerk (Williams, CDHS) Rust, K., Specialist (Williams, CDHS) Burnett, R., Research Assistant (Shapiro/Votey, NSF/NII) Doyle, J., Assistant (Williams, CDHS) Denning, M., Research Assistant (Mead, UERG)</td>
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