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# CONNECTIONS

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VOLUME III, NUMBER 3

Winter 1980

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# small print

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Please make all remittances payable to INSNA. Members outside North America, please use an International Money Order drawn on a U.S. bank in U.S. currency. Whole volumes subscriptions only please. Volumes will be sent out only on receipt of payment. These requests are designed to reduce office work and costs.

SOCIAL NETWORKS: Subscriptions and renewals will be accepted through INSNA at US\$26.00 per volume for individuals; institutions should contact the publisher: Elsevier Sequoia S.A., P.O. Box 851, CH-1001, Lausanne 1, Switzerland.

CONTRIBUTIONS are solicited from members and colleagues; papers of any length, especially news, abstracts, reviews of applications of networks in different fields, critiques, problem areas etc. If acknowledgement of a manuscript is desired, please enclose a self-addressed postcard (NOT stamped). In order to keep costs down, we prefer not to return manuscripts, please retain a copy for yourself.

Connections authors have permission to republish their articles as originally printed or in a revised form.

Instructions on how to prepare camera-ready copy for Connections will be found elsewhere in this issue.

THANK YOU TO: Marja Moens for typing and to Edward Lee and Beverly Wellman for the proofreading chores for this issue of Connections.

## RENEWAL TIME

IT'S TIME TO RENEW CONNECTIONS FOR 1981 (VOLUME IV)...think of all the fun-filled, thought-provoking things we've flung your way this year--Jeremy Boissevain's critique of the network approach; research reports and comments from such learned folk as Muriel Hummer, Russell Bernard and Peter Killworth, Claude Fischer, Manuel Barrera, Douglas White, Michael Mandel and Chris Winship; early news on thesis discoveries, such as Philippa Pattison's work on structural equivalence and block modelling (see this issue); Jon Sonquist surveying concepts and tactics in computer analyzing network data and David Trimble guiding us to network therapies; news of unforgettable books (see in this issue--Networking: The Great New Way for Women to Get Ahead); plus hundreds of abstracts gathered from the four corners; not to mention the latest recipe for cooking moose brains.

What a bargain! Other journals charge you twice as much, and don't give you any moose recipes.

NEXT YEAR'S SUBSCRIPTION IS STILL ONLY \$8.00!!! We hope to give you even more of the same (only better). In addition, we've commissioned a boatload of articles critically reviewing substantive research in specific network analytic areas, and taking stock of where we are going. You can't afford to be without it, if you want to know where the boat is going.

PLEASE RENEW NOW. We have no paid subscription staff, if you delay, we will have to raise prices (we are close to the margin now), and spend time, energy and money chasing you. We would much rather write papers and watch Maple Leaf hockey games. We are enclosing a renewal form for your convenience. If you lose that, there is another form as the last page of this issue.

IT IS ALSO SOCIAL NETWORKS RENEWAL TIME. The price for the new SOCIAL NETWORKS, Volume 3 (1981) is US\$26.00. This is a bargain rate for INSNA members--others pay more than double. The publishers say that their price hike is due to the steep decline in the dollar relative to the Swiss franc. Ronald Reagin, take note! You can renew SOCIAL NETWORKS (or be a new subscriber) on the same form as CONNECTIONS.

YOU HAVE NO EXCUSE. RENEW NOW!!!!

INSTITUTIONAL SALES. No library should be without CONNECTIONS, but most are! To heal this gap, we are enclosing a special institutional subscription form. Please send it to your library (or to your boss), with a cheery note saying that all the folks on your corridor think it should subscribe to CONNECTIONS (although you each want your personal copy, of course). The library rate is \$16.00, which takes into account all of the unpaid voluntary work that keeps the personal subscription price so low. The more institutions that subscribe, the more likely we are to be able to keep personal rates low in the future.

BACK ISSUES. There are a limited number of back issues of CONNECTIONS first two volumes. We are having a clearance sale of each issue for \$1.50 each. We have inserted a separate back issue form in your mailing envelope, with a spare one included as part of this issue. See it for highlights of each issue.

SOCIAL NETWORKS back issues are also available. Volumes I and II cost US\$25.00. Order them directly from the publishers: Elsevier Sequoia S.A., P.O. Box 851, CH-1001, Lausanne 1, Switzerland.

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# NETWORK NOTEBOOK

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## "Stein Rokkan" Comparative Research Prize

The International Social Science Council will award this \$2,000 prize bi-annually, starting in 1981. The prize is intended to crown a seminal contribution in comparative social science research written in English, French or German by a scholar under 40 years old on 31 December, 1981. It can be a manuscript, printed book, or collected works, as long as it has been published after 1979.

To apply, submit four copies of manuscripts (typed double-spaced, or printed) before 31 March, 1981, to: The Secretary-General, ISSC, UNESCO, 1 rue Miollis, F-75015 Paris, Franc. (from QUANTUM 16)

## Quantitative History Commission

The new International Commission for the Application of Quantitative Methods in History hopes to promote contacts and exchanges of experience between historians interested in using quantitative methods and the computer. It hopes to organize debates within International Congresses of Historical Sciences; organize independent conferences; encourage the international exchange of books, papers and research information; encourage the international publication in reviews of specialized papers; encourage comparative quantitative studies by proposing common problems to be studied in various countries; help define criteria to facilitate the comparison of quantitative historical data.

It's Provisional Bureau consists of François Furet (France), Konrad Jarausch (U.S.A.), Juchan J. Kahk (U.S.S.R.), Vasile Liveanu (Romania), Bo Ohngren (Sweden) and Wilhelm H. Schroder (W. Germany). (from QUANTUM 16)

## Blau/Skocpol Gain Laurels

The American Sociological Association's 1980 Distinguished Contribution Award was presented jointly to Peter Blau for Inequality and Heterogeneity and to Theda Skocpol for States and Revolutions.

The awards stated that Blau "consistently combines logical rigor with empirical relevance" in an attempt to build a system of codified, formalized and testable propositions based on a specific social structural perspective.

Skocpol combines "innovative sociological theorizing and excellent scholarship" in developing a perspective on the revolutionary process that is based on the interrelationships among the state structure, the class system, and the pattern of external power relations through an examination of the French, Russian and Chinese revolutions." (from ASA Footnotes)

## New Journals

Exchange Networks is the new bi-monthly newsletter of the Neighborhood Resource Exchange Networks. It provides information on citizen volunteer skills banks and neighborhood barter networks. The first issue profiles several operating barter networks and skills banks and recommends a variety of relevant publications. Information and subscriptions from David Tobin, Editor, The Barter Project, 1114 16th Street, N.W., Washington, DC 20036, U.S.A. No price indicated.

Voluntary Action is a new quarterly reporting on the work of voluntary organizations and projects. Information from the journal at 26 Bedford Square, London WC1B 3HU, England.

Netnotes is a new publication from the new Politechs Information Sharing Networks--"an overlapping mix of communication networks which facilitate interaction among a wide variety of public and private service institutions and organizations". Politechs uses the EIES electronic mail system to help participants exchange information and answer queries. Information from Harry Stevens, Participation Systems Inc., 43 Myrtle Terrace, Winchester, Massachusetts 01890, U.S.A.

## Over-Zealous Editor

Connections inadvertently published a bibliography on communications networks by Ronald Rice somewhat prematurely in the last issue (III, 2). The author wishes us to note that the section printed was only an unrepresentative introduction to an otherwise wide and growing area.

Anatol Rapoport--Professor Emeritus

"Anatol Rapoport, eminent psychologist, mathematician and one-time concert pianist, has recently been appointed Professor Emeritus of the University of Toronto. His conception of 2-person game theory is considered a major contribution to science.

"Professor Rapoport was originally a student of music, and spent a number of years as a concert pianist before turning to a career as a scientist. While a member of the faculty, he gave concerts which are still memorable.

"(Rapoport is now) Director of the Institute of Advanced Studies in Vienna. He still returns to Scarborough, (College, Toronto) each summer to carry on his teaching in the social sciences. His honorary awards include Doctor of Humane Letters, University of Western Michigan and Honorary Fellow of New College, Toronto". (excerpted from the University of Toronto Bulletin, October 6, 1980)

Network Network on the Network

Peter and Trudy Johnson-Lenz will star in a U.S. educational television show (on PBS network) late January, 1981. "Goodbye Gutenberg" will explore the cultural effects of new electronic mail network technology in the next twenty years. The Johnson-Lenzes are shown looking at EIES (electronic mail) messages, working in their garden in Lake Oswego, Oregon, and talking about decentralized networks. (from CHIMO).

Postdocs in Mental Health

Rutgers and Princeton Universities have a new predoctoral and postdoctoral training programme (under David Mechanic) in five areas of mental health research: epidemiology of psychiatric disorders and helpseeking; the integration of medical and psychiatric care; deinstitutionalization of the mentally ill; evaluation of mental health programmes, and mental health policy analysis. Postdoc stipends: \$13,380-\$18,780. Information from Mental Health Training Program, Department of Sociology, Rutgers College, CN 5060, New Brunswick, New Jersey 08903, U.S.A.

U.C.L.A.'s postdoc consists of a two-year core curriculum emphasizing advanced quantitative and qualitative training in the first year and practical evaluation research in mental health settings in the second year. Trainees are required to serve an internship in a community mental health agency. Stipends: \$13,380-\$17,040. Information from Oscar Grusky, Director, Mental Health Program, Department of Sociology, U.C.L.A., Los Angeles, California 90024, U.S.A. (from ASA Footnotes)

Info Flows

Nan Lin (SUNY-Albany) recently made a presentation to the Chinese Sociological Association...Community section of the American Sociological Association has elected Irwin Sanders as Chair and Peggy Wireman and David Cooperman as Council members...Charles Jones (McMaster) spending sabbatical year at the Sociology Department at Harvard...Brian Foster now Associate Professor, Department of Anthropology, Arizona State, Tempe... Mark Mizruchi to Scientific Computing Center, Albert Einstein College of Medicine, Bronx, N.Y.

World Future Network

"The World Future Network may eventually consist of millions of people around the globe. They may be small in number relative to world population but they would be well represented in the leadership of government, business, and education. The Network might also include living-learning communities for people exceptionally interested in the future world. People in these communities could do research on world problems and teach others the new techniques and attitudes of holistic, futuristic thinking. The Network might also include libraries, computerized data banks, and other repositories of knowledge. The centers would be scattered around the world, but linked together by a variety of communications media.

"Such a World Future Network could provide a nervous system for humanity, the beginning of a collective consciousness and intelligence for mankind. The Network would not, of course, dictate people's opinions and ideas any more than a telephone system tells its users what to say when they are talking, but the Network would facilitate the communication, information-gathering, opinion-formation, and consensus that could eventually lead to joint action on collective problems." Edward Cornish in The Futurist, October 1980. The World Future Society requests donations to the Network.

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*"If we can create living networks of the diversely gifted and the diversely trained...we shall automatically focus our inventiveness on the very center of the evolutionary process". Margaret Mead*

RECONNECTIONS: INSNA Members Speak Out

Having been inundated with bags of mail in response to our recent questionnaire (Vol. II, No. 3), your editors are now in a position to report on your assessment of Connections.

You will see, in the table below, that the sections you found most useful were abstracts of Special Journal issues, journal papers, conference papers etc.. Good! This is a strong indication that you are all busy people who wish to be efficiently kept up to date with the literature in your field. Almost equally as useful to most of you is the Network Notebook and Directory--indicating to your editors that you also like to be kept up to date concerning the happenings and the people of INSNA. The computer programs section appeals to a more narrowly-defined--but very important, audience.

TABLE 1  
SECTIONS OF CONNECTIONS FOUND USEFUL

Section	Very Useful	Useful	Fairly Useful	Not Useful	Total	
	%	%	%	%	%	(n)
Network Notebook	52	44	4	-	100	(27)
Original Papers	44	44	12	-	100	(25)
Meeting Calendar	30	43	26	-	99	(23)
Special Journal Issues (Abstracts)	67	29	4	-	100	(24)
Thesis Summaries	35	48	17	-	100	(23)
Computer Programs	21	13	54	13	101	(24)
New Books	44	37	19	-	100	(27)
Abstracts of Journal Papers	52	48	-	-	100	(25)
Abstracts of Conference, etc. Papers	58	38	4	-	100	(26)
Directory	48	36	16	-	100	(25)
Directory Updates	52	26	33	-	100	(23)

Among the articles published to date, you indicated those by Bernard and Millworth, "Small World Literature"; Levine and Mullins, "Structuralist Analysis of Data"; and Friedmann, "Are Distributions Really Structures?" as having been used most frequently in your work. These three articles are all position papers on various approaches to structuralist theory and methodology and, encouraged by your responses, we intend to publish further papers of this genre in the near future.

When we asked you to indicate how you would like to see CONNECTIONS improved, we received a hatful of mutually-exclusive suggestions: "cut back on size", "more papers", "more practical application", and "more abstract structural analysis". Perhaps this means that we are not displeasing all of the people all of the time all for one cause. In fact, your most common response was to leave CONNECTIONS as it is.

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# MEETING CALENDAR

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## *SUNBELT SOCIAL NETWORKS CONFERENCE - REMINDER!!*

Don't miss your chance to have network fun in the sun! 20-22 February, 1981 in Tampa, Florida. Details in CONNECTIONS III, 2 or from H. Russell Bernard (Anthropology, University of Florida) or Alvin Wolfe (University of South Florida).

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## *ALBANY NETWORK CONFERENCE - April 3-4, 1981*

Full title: "The Albany Conference on Contributions of Networks Analysis to Structural Sociology". Department of Sociology, SUNY-Albany campus.

Participants include: Ronald Burt, Ronald Breiger, James Coleman, Karen Cook, Bonnie Erickson, Joseph Galaskiewicz, Mark Granovetter, Charles Kadushin, David Knoke, Edward Laumann, Peter Marsden, Barry Wellman, Richard Alba, Peter Blau, Nan Lin, Gwen Moore, Steven Rytina.

Details from Nan Lin (Sociology, SUNY-Albany).

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## *SMALL CITY AND REGIONAL COMMUNITY CONFERENCE - March 26-27, 1981*

This annual conference solicits papers embracing topics as they relate to the smaller city, town and region. Such topics might include ethnicity, interorganizational relations, service delivery, citizen participation. Proposals encouraged from practitioners and scholars. Theme: "The Impact of Growth: Social, Political, Environmental." Most papers will be published in a Proceedings.

Information from Robert Wolensky (Sociology/Anthropology, Univ. of Wisconsin - Stevens Point) or Edward Miller (Political Science, Univ. of Wisconsin - Stevens Point).

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## *CANADIAN SOCIOLOGY AND ANTHROPOLOGY ASSOCIATION Annual Meeting 28-31 May, 1981*

Dalhousie University, Halifax, Nova Scotia. Sessions of interest include (session title, name of organizer, organizer's university): "Political Economy of Primary Production," Robert Stirling, Regina. "Theory and Method in the Study of Economic Elite Structures," Lorne Tepperman and R. J. Richardson, Toronto. "Maritime Adaptations: The Interplay of Local and Extra-Local Factors," W. C. van den Hoonard, New Brunswick. "World System Studies," Bob Russell, SUNY-Binghamton. "Attitudes, Measurement and Scaling Applications," Charles Jones, Sociology, Harvard. This session is intended to bring together studies on the measurement of a wide variety of sociological concepts, including aggregate-level notions such as the amount of exploitation or collective violence in a society, the properties of social networks, and individual characteristics such as social class position and attitudes.

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## *"ECONOMIC INEQUALITY AND INDUSTRIALIZATION IN GERMANY" - 25-27 June 1981*

The goal of the planned workshop at Universität Münster is to bring together historians, economic historians and sociologists who have ongoing research on distributional aspects of modern economic growth in Germany, Austria and Switzerland.

Papers invited from researchers on topics such as trends in income and wealth distribution, the structure of wages, and the distribution of any aspect of economic well-being or welfare (and their relationships to modern economic growth since the 19th century).

Information from Dr. Rolf Horst Dumke, Institut für Wirtschafts und Sozialgeschichte, Universität Münster, Magdalenenstr. 1, D-4400 Münster, West Germany (Tel: 0251-832907).

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*11th EUROPEAN CONGRESS FOR RURAL SOCIOLOGY, 9-15 August 1981, Helsinki*

Theme: "How rural is our future?" Working groups on rural employment and alternative farming systems; Non-economic remuneration of rural work; Social aspects of rural planning; Employment alternatives; Jobs in rural development; Social consequences of resource conservation; Rural organizations and developments. Additional groups may be organized.

Information from Ilkka Vainio-Mattila, Viisaritie 25, 01640 Vantaa 64, Finland.

*LOCAL GOVERNMENT AND POLITICS INTERNATIONAL WORKSHOP, October 1981, Germany*

Tentative topics include: Urban political economy, Urban social movements and neighborhood revitalization, Urban housing and politics, and Urban management and evaluation research. Papers that stress cross-national perspectives especially welcome.

Conference organizers: Gerd-Michael Hellstern, Erwin Zimmerman, Ken Newton.

Limited funds may be available to cover European travel and expenses.

Information from Terry Clark (Sociology, Univ. of Chicago) and Gerd-Michael Hellstern (Zentralinstitut für Sozialwissenschaftliche Forschung, Freie Universität, 1 Berlin 33, Babelsbergerstr. 15-16, West Germany).

*WORLD CONGRESS OF SOCIOLOGY, Mexico City, August 1982*

Ed. note: The announcement specified everything except for the exact time and place.

The usual potpourri of plenary sessions, research groups and ad hoc groups. INSNA's Coordinator has organized ad hoc groups for the past 2 congresses: Toronto, Uppsala. IT IS TIME FOR SOMEONE ELSE TO DO THIS -- THE TIME IS NOW! Contact INSNA office if interested.

"The State Organization of Science" -- World Congress Session.

Y. Michel Bodemann is organizing this session for ISA Research Committee #9. Please send him abstracts and papers at the Dept. of Sociology, Univ. of Toronto, Toronto Canada M5S 1A1.

*PAST MEETINGS*

*AMERICAN PSYCHOLOGICAL ASSOCIATION. ANNUAL MEETING.  
Montreal. 1-5 September 1980.*

Symposium: Social Networks as Support Systems, Social Networks as Personal Communities (Barton Hirsch, chair). September 2, 1980, Queen Elizabeth Hotel.

Abstracts:

"Coping, Support, and High-Risk Populations: A Social Network Approach." Barton Hirsch (Stanford Medical School).

Focusing on the role of the social network in the coping process, this paper presents the development of an ecological model of social adaptation in high-risk populations. There are several factors that make a network approach to coping and adaptation especially attractive: 1) the network is a crucial mediator between personal values and social competencies on the one hand, and environmental variables (eg, aggregate neighborhood composition) on the other; 2) network density, which measures the proportion of actual to potential ties among network members, provides a means of assessing systemic properties of support systems; and 3) the focus on relationships with identified individuals has concrete benefits for designing preventive and therapeutic interventions.

Three studies are presented. Findings from a first, exploratory study of 32 college students during final exams suggested that low density networks can provide more effective support.



The second study involved an intensive assessment of social adaptational processes among 20 recent young widows and 14 mature women returning to college full-time. Support and network data were obtained via semi-structured interviews, as well as standardized logs on which person-network interactions were recorded daily over a 14 day period.

Two prototypical support networks emerged from these findings. One of these, again a low density network, was significantly associated with more satisfying support, fewer symptoms, better mood, and higher self-esteem. These low density networks are characterized by a greater diversity of expressed interests and greater segregation of different spheres of activity. Such factors promote a major coping objective: the development of satisfying social roles appropriate to changed life circumstances.

Current development of the coping model is discussed in relation to ongoing research with adolescent children of a schizophrenic or depressed parent. The research focuses on how structurally-based network supports are interwoven with cognitive and behavioral styles as complex coping strategies evolve over time.

The paper concludes with a discussion of how the two prototypical networks provide contrasting personal communities.

"Social Network Interventions." Carolyn Attneave (Univ. of Washington).

During the 1960s I was involved in delivering community mental health services to half a dozen tribal groups of American Indians. From this experience I learned to value strong ties between family units with histories of several generations' associations and a central core of values and traditions. On a number of occasions I found that a consultative role to these family networks was a viable and more acceptable route to the solution of human crises associated with potential or actual suicides, psychotic behavior, and child abuse. When such crises occurred it generally lead to the paralysis of the network unit, or to its panic and escalation into chaotic transactions among its members. Consulting with the leadership of these groups allowed them to regain their natural functioning and shortcircuited the need for professional institutionalized responses.

In the years following I have worked to adapt these procedures to lower and middle class urban populations as alternative-to-hospitalization and aftercare interventions. The need for such intervention arises when the social system becomes sufficiently dysfunctional so that it no longer provides a balance of activity, essential support, and resources for problem solution. These networks are often characterized by a history of "cut-offs" due to the mobility and pressure for individual success in the general American society. Intensive work with the assembled members of the network (sometimes 40-60 people) can stimulate new growth and cohesiveness among family and friends. The metaphor of retribalization seems to express the rejuvenation of community that often arose from both these interventions and the earlier work with American Indians.

I will conclude by discussing a number of general issues, such as the kinds of networks for which these procedures are suitable; emerging efforts to implement network-oriented primary prevention interventions; and criteria for evaluating the full impact of such systems level changes.

"Networks and the Psychological Sense of Community." Seymour Sarason (Yale).

The dilution or absence of a psychological sense of community is among the most destructive dynamics in the lives of people in our society. The themes of unwanted destructive loneliness and social isolation are unmistakable and monotonously repetitive, as is the fact that they are reflections of the nature and structure of living in our communities. This paper is concerned with those networks of relationships that can give greater expression to our needs for intimacy, diversity, usefulness, and belonging.

Based on recent experience and studies, this paper focuses specifically on how resource exchange networks can sustain a psychological sense of community. Resource exchange networks are informal associations of representatives from various organizations (clinics, schools, government agencies, universities and so on) who voluntarily join together to exchange knowledge, services, products, personnel, and other resources in order to accomplish some common goal. These exchanges are made barter-style, trading available resources for needed resources for the mutual benefit and growth of all network members.

Using concrete descriptions of resource exchange networks as a reference point, the concept of psychological sense and community will be further elaborated, the ways in which networks can provide such a sense of community will be discussed, and illustrations presented on how such networks can be developed and maintained.

Special attention will be paid to the relation of work and non-work networks. Do these differ in what they require to foster a psychological sense of community? What are the possible consequences of introducing a wider socializing dimension into resource exchange networks, and, correspondingly, stimulating greater and more self-conscious resource exchange among predominantly social networks?

"Do Networks Support?: Towards a More Differentiated Use of Social Network Analysis in the Psychological Study of 'Support Systems'." Barry Wellman (Toronto).

The power of the community psychological "support system" literature has been restricted by the rudimentary use made of network analytic concepts. This paper suggests some areas for the development of support system research, using the advances sociological network analysis has made from its metaphorical beginnings:

- \*\* a more differentiated concept of network structure, instead of analysis of "the social network";
- \*\* avoidance of excessively voluntaristic definitions of ties and networks;
- \*\* more differentiated definition of ties, in terms of the types of ties, the content of resources flowing through them, the broadness of the relationships, the power of network members, and network members' structural locations;
- \*\* the situation of interpersonal networks within the structure of large-scale social systems which determine the opportunities and constraints open to network members;
- \*\* increased use of more complex methods to describe networks and explain processes.

MASSENAKTEN ALS DATENBASIS FÜR HISTORISCH SOZIALWISSENSCHAFTLICHE FORSCHUNGEN. *Quantum Colloquium*. 12-13 December 1980. Bad Homburg, West Germany.

#### Sessions

Massenakten in Archiven und Datenbanker der Bundesrepublik: Bestandbeschreiben und Fragen and di sozialwissenschaftlichen Nutzer:

Dietrich Hürold (Stadtarchiv Bonn), Friedrich Kahlenberg (Bundesarchiv Koblenz), Everhard Kleinertz (Historisches Archiv Köln), Ulrich Naumann (Stadtverwaltung Köln), Horst Romeyk (Hauptstaatsarchiv Düsseldorf), Hermann Rumschüttel (Staatsarchiv München), Herbert Schmidt (BMA, Bonn).

Sozialwissenschaftliche Quellenkritik von Massenakten: Entstehungsbedingungen des Materials und Indikatorenqualität der Daten:

Wolfgang Bick und Paul J. Müller (Universität Köln), Manfred Brusten (Gesamthochschule Wuppertal) Hans-Ulrich Derlien (Universität Bamberg), Christian v. Ferber (Universität Düsseldorf), Dieter Grunow (Universität Bielefeld), Hans-Jürgen Kerner (Universität Hamburg), Reinhard Mann (Universität Köln).

Datenerhebung aus Massenakten: Definition der Grundgesamtheit, Stichprobenziehung, "record-linkage," "tracing" von Vorgängen: Stellungnahmen aus der Forschungspraxis durch Vertreter der Wissenschaft Manfred Brusten (Gesamthochschule Wuppertal), Hans-Ulrich Derlien (Universität Bamberg), Christian v. Ferber (Universität Düsseldorf), Dieter Grunow (Universität Bielefeld), Hans-Jürgen Kerner (Universität Hamburg), Reinhard Mann (Universität Köln).

Erwartungen der Sozialwissenschaften an Archive und Probleme ihrer Realisierung: Heinz Boberach (Bundesarchiv Koblenz), M. Rainer Lepsius (Universität Mannheim), Erwin K. Scheuch (Universität Köln).

Source: Quantum 16.

NEIGHBORHOOD ORGANIZATION RESEARCH GROUP PANEL  
*American Political Science Association annual meetings. Washington, D.C. 28-31 August 1980.*

#### Session

"Neighborhood Stability: The Effects of Social Support Systems and Neighborhood-Based Organizations and Institutions."

"Neighborhood Support Systems, Neighborhood Organizations, and Neighborhood Stability," Roger Ahlbrandt, Jr., University of Pittsburgh.

"Strengthening Neighborhood-Based Support Systems--An Empowerment Model," David Biegle, Univ. of Southern California.

"Neighborhood as a Support System," Donald I. Warren, Oakland University.

"The Effects of Block Organization on the Social Environment of a Neighborhood," Gary A. Giamartino, College of Charleston, and Abraham Wandersman, University of North Carolina.

A METHOD FOR THE ASSESSMENT OF SOCIAL SUPPORT NETWORKS IN COMMUNITY SURVEY RESEARCH

Manuel Barrera, Jr., Department of Psychology, Arizona State University, Tempe, Arizona 85281

**ABSTRACT.** Network analysis has provided concepts and methods that have proved valuable in the assessment of social support systems. It is argued, however, that existing network methods often do not specifically identify providers of social support and that the reliability of these methods is seldom evaluated. A study was subsequently conducted to develop a structured interview for identifying social support network membership and to evaluate its reliability. Results from several reliability indicators suggested that total network membership was reliably assessed with these procedures. Future research in the development of this instrument and its potential applications in community mental health research are briefly discussed.

Social support is emerging as a vibrant topic in community psychology and community mental health. Although these fields have had long-standing interests in related concepts such as attachment, affiliation, and social integration, the more contemporary concept of social support conveys the image of individuals being fortified, strengthened, or even protected from adverse conditions through the provisions of social relationships.

In a recent issue of *Connections* Todd (1979) noted how psychological researchers have applied network analysis to the study of social support systems. Although the empirical literature on social support is still in a relatively early stage of development, a number of investigations have demonstrated the value of network analysis methods and concepts for research on community mental health issues (Brim, 1974; Hirsch, 1979, 1980; Pattison, 1977; Ratcliffe, Zelhart, & Azim, 1978; Tolsdorf, 1976).

Because there is a lack of psychometrically sound measures of social support, the development of measurement methods has been identified as a priority research need (Dean & Lin, 1977). Part of the appeal of the network methodology is that it provides a systematic approach to the assessment of key aspects of social support systems, but formal evaluations of the reliability and validity of network analyses are seldom conducted (Hammer, 1980).

The development of methods for evaluating social support networks for community survey research presents measurement questions that are not shared by all applications of network analysis. Because large-scale community surveys often involve the interviewing of a single household resident, networks are usually defined by self-report rather than by direct observation of exchanges. The ability of a subject to reliably identify network members thus becomes a critical assessment issue. Also, social support is a somewhat specialized function that may not be supplied by all friendships, family ties, or other significant social relationships. For researchers specifically interested in social support as a construct, assessment methods must be developed to directly identify those individuals who provide the functions that define social support. In light of these issues, the purpose of the present paper is to describe an approach to the assessment of social support networks and to report on some of its scale properties.

Part of the motivation for developing a new approach of assessing social support networks grew out of the observation that existing methods fell short of specifically identifying socially supportive individuals. In some studies (e.g., Brim, 1974; Hirsch, 1980; Pattison, 1977) social network members were identified with instructions for subjects to list people who were "significant" or "important" to them. Consider, for example, the instructions from Pattison's Psychosocial Network Inventory:

List by first names or initials all persons who are important in your life at this moment, whether you like them or not. These persons may be, for example, family members, relatives, friends, neighbors, workmates, clergy, bosses, recreational associates, etc. Use your own definition of who is important, and place people in whatever category you consider appropriate.

Ratcliffe *et al.* (1978) observed that subjects are at times confused by the vagueness of the term "importance." A natural question for some subjects was "important in what way?" Furthermore, while subjective importance might be a reasonable dimension on which to identify a social "importance" network, it does not call for respondents to name individuals who specifically serve socially supportive functions. A similar problem arises in methods that identify network members on the basis of their relationship with the focal subject. When social support is the central concern, asking a subject to name key family members, friends, coworkers, etc. is imprecise since not all of these individuals are likely to actually provide support. Jones and Fischer (1978) have already discussed the variety of meanings that individuals attach to the word "friend" which results in the inconsistent interpretation of this term from one individual to another.

To avoid these problems, Ratcliffe *et al.* (1978) and Jones and Fischer (1978) began with conceptual frameworks that specified the functions (needs) that individuals would serve in their relationships with the focal subject to qualify them as network members. These functions were then translated into a series of questions that requested subjects to identify those individuals who fit the social functions that were described. For example, rather than requesting subjects to name their friends, Jones and Fischer (1978) asked them to identify the people with whom they shared leisure time interests, talked to about personal matters, called on for help in decision making and other relevant activities. Similarly, Ratcliffe *et al.* (1978) requested their respondents to nominate up to three adults who fulfilled each of eight social needs.

One of the hopes in using specific criteria for identifying network membership is that it will lead to reliable assessment. Investigators have typically neglected to evaluate or report the reliability of their network measures. Jones and Fischer's study was a rare exception. In one phase of their research, subjects identified network members by naming individuals who served social functions that were described in a series of questions. Later in the interview, subjects were asked the same name-eliciting questions in almost identical form. This time, however, subjects were given the list of network members they had previously named. For each of the repeated questions they were asked to indicate which individuals on the network list served the described functions. Jones and Fischer found that an average of over 50% more names were added when the questions were asked a second time. In addition, over 25% of the names that had been listed the first time were not identified when the questions were repeated.

There were two limitations to the test-retest reliability procedures that Jones and Fischer used in their preliminary report. The first and second administrations of the questions were part of the same interview and separated by a relatively brief period of time. The modest reliability that was observed might have been influenced by memory effects. In addition, the test and retest procedures were not equivalent since subjects were asked to identify (recognize) names during the "retest" that had already been listed in the first administration of name-eliciting questions. Despite these limitations, Jones and Fischer (1978) provided an initial assessment of the reliability of interview procedures for identifying network membership. Their report, in fact, served as a model for some of the procedures and analyses used in the present study.

#### Objectives

The purpose of the present paper was to develop procedures similar to those described by Ratcliffe *et al.* (1978) and Jones and Fischer (1978) that could be used to assess social support networks. The emphasis was on identifying individuals who specifically provide forms of social support rather than more general social functions or who are simply important in some unspecified way. An underlying concern was to develop procedures that would ultimately be suitable for use in broad-scale community surveys. Given the lack of information regarding the reliability of network assessment procedures, a further purpose of the study was to evaluate the reliability of the assessment method and its related psychometric properties.

#### Description of Network Measure

In a conceptual analysis of the social support literature (Barrera, Kochanowicz, & Gonzalez, 1979), six categories of social support were identified:

1. Material Aid: providing material aid in the form of money and other physical objects;
2. Physical Assistance: sharing of tasks;
3. Intimate Interaction: interacting in a nondirective manner such that feelings and personal concerns are expressed;
4. Guidance: offering advice and guidance;
5. Feedback: providing individuals with information about themselves;
6. Social Participation: engaging in social interactions for fun, relaxation, and diversion from demanding conditions.

These categories appeared to capture the range of activities that a number of social support researchers had described in their discussions of social support. Papers by Caplan (1976) and Hirsch (1980) were particularly influential in defining these categories.

For each category, two questions were developed to elicit the names of network members. First, subjects were asked to list those individuals who they typically regarded as providers of the supportive function that was described in each category. Second, subjects were asked to indicate which of the individuals who were named in response to the first question had actually supplied that type of support during the past month.

Interviewers maintained a cumulative list of individuals who were named in response to each support category and recorded the support functions they served. There were no limits on the number of names that could be listed for any particular item.

After responses to each of the six support categories had been collected, interviewers asked subjects to identify those individuals who they might likely encounter in angry or upsetting social interactions and those who they had actually encountered in this way during the preceding month. Of particular interest here was the identification of supportive relationships that were also sources of conflict. Not only did Henderson et al. (1978) find that unpleasant social interactions were significantly associated with psychiatric morbidity, but I felt that conflict with individuals who were also important sources of support would potentially have deleterious effects on the well-being of subjects.

Following the identification of all network members, brief background information was obtained which included each member's age, sex, ethnicity, and relationship to the focal subject (e.g., father, sister, workmate, school counselor, etc.). As part of the larger interview, subjects were also asked to rate their need and satisfaction with the support they received during the preceding month. Since the present report is only concerned with the network measure, the results of these additional ratings will not be discussed.

### Method

An initial study of the network measure's reliability was conducted with 24 female and 21 male university students. Subjects had a mean age of 19.2 years.

Two male and two female research assistants served as interviewers. A fifth research assistant scheduled all assessment sessions with the subjects and thereby allowed the interviewers to remain blind to information regarding the subjects.

Each subject received two assessments that were separated by at least two days. Subjects were always reinterviewed by an interviewer other than the one who conducted the initial interview in order to avoid building in spurious consistency across the two assessments. Furthermore, the order in which the support categories were presented in the second interview was randomized and in all cases differed from the order used in the initial interview.

### Reliability of Network Indices

As previously discussed, subjects were asked to name individuals who were perceived as typical providers of a particular category of support (perceived supporters) and those who had actually provided that form of support during the preceding month (actual supporters). For each category of support and for both perceived and actual supporters, Pearson product-moment correlations were calculated for the number of individuals named in the first and second interviews. With the exception of the correlation for the number of individuals who were perceived as providing Guidance,  $r(43) = .18$ , NS, all test-retest correlations were significant ( $p < .01$ ) and ranged from .37 to .87. Total network size, the key index in this study, was defined as the number of individuals who provided at least one form of social support. A high test-retest reliability coefficient was obtained for both perceived network size,  $r(43) = .88$ ,  $p < .001$ , and actual network size,  $r(43) = .88$ ,  $p < .001$  (see Table 1).

To test for differences in the mean number of network members named in the first and second interviews, correlated t-tests were conducted for each support category and for total network size. The number of names elicited for three support categories (Material Aid, Intimate Interaction, and Guidance) showed significant increases from the first to the second interview, while the remaining categories (Feedback, Physical Assistance, Social Participation, and Conflict) and total network size remained stable (see Table 1).

More detailed analyses were conducted to determine that not only comparable numbers of individuals were being named during both interviews, but that precisely the same individuals were being named on both occasions. Two types of errors were possible. Individuals named during the first interview could be omitted on the second assessment. Conversely, individuals could be named during the second interview who were not named initially. Reliability percentages were calculated by dividing the number of network members named on both the first and second interviews by the number of individuals named on either the first or second interview, and then multiplying this fraction by 100. These percentages ranged from a low of 48.1 to a high of 73.0. Total network membership proved to be the most reliable indicator with reliabilities of 79.5 and 73.8 for perceived and actual network size respectively (See Table 1).

Table 1

## The Reliability of Network Member Identification

Support Categories	PERCEIVED NETWORK					ACTUAL NETWORK				
	Mean Number of Network Members		t <sup>c</sup>	r <sup>d</sup>	% <sup>f</sup>	Mean Number of Network Members		t <sup>c</sup>	r <sup>d</sup>	% <sup>f</sup>
Test	Retest	Test				Retest				
Intimate Interaction	3.9	5.7	5.72***	.59	59.0	2.9	4.1	4.47***	.43	62.0
Material Aid	7.4	8.5	3.19**	.78	73.0	2.6	3.2	2.29*	.76	48.1
Guidance	4.8	7.1	3.56***	.18 <sup>e</sup>	59.0	3.0	4.6	4.88***	.64	56.9
Feedback	7.1	7.7	NS	.37	58.8	5.0	5.7	NS	.59	56.2
Physical Assistance	7.1	7.9	NS	.61	63.9	4.5	4.9	NS	.64	54.2
Social Participation	9.3	9.3	NS	.81	69.0	7.9	7.7	NS	.87	70.9
Total Network Size <sup>a</sup>	12.6	12.3	NS	.88	79.5	10.4	10.8	NS	.88	73.8
Conflict <sup>b</sup>	3.4	3.5	NS	.50	69.1	2.5	2.6	NS	.54	61.1

<sup>a</sup>Total network size represents the number of individuals who were identified as serving at least one support function.

<sup>b</sup>Conflict represents members of the total network who provided both supportive and unpleasant social interactions.

<sup>c</sup>Correlated t-tests were conducted for the number of network members named for each category during the test and retest interviews. Only statistically significant *ts* are shown.

<sup>d</sup>Pearson-product moment correlations for the number of network members named for each category during the test and retest interviews.

<sup>e</sup>This correlation is not significant. All others are significant,  $p < .01$ .

<sup>f</sup>Percentages of network members who were reliably identified on both the test and retest interviews.

N = 45 for all analyses

\* $p < .05$

\*\* $p < .01$

\*\*\* $p < .001$

#### Relationships Between Support Categories

The internal consistency reliability of the six positive support categories was calculated for both perceived and actual social support. Coefficient alphas of .779 and .740 were obtained for perceived and actual support respectively.

The moderately high alpha coefficients suggested that there was a considerable degree of consistency in the number of network members listed across the six support categories. While this internal consistency analysis provided one type of information regarding the relationship between support functions, it did not indicate the relationship between support functions when an individual network member was the unit of analysis. It was hypothesized that the support categories are related to each other in a hierarchical order such that if an individual network member provided one type of support, we could predict that he or she also provided support functions lower on the hierarchy. More specifically, a degree-of-intimacy continuum was hypothesized in which network members who provided Intimate Interaction were likely to serve all of the remaining five support functions. Social Participation was predicted to occupy the bottom rung of the hierarchy, individuals who served only one support function would likely provide only Social Participation. No specific order was predicted for the remaining four support categories.

The use of scalogram analyses (Guttman scaling) called for the selection of individual network members from each subject's network list. One family and one non-family network member were randomly selected from each subject's network to test for possible differences in the support functions that were served by each. Separate random selections were made from the networks generated in the test and retest interviews. Results from the first interview showed that family members (86.0%) were significantly more likely than non-family members (48.8%) to be regarded as sources of Material Aid, while non-family members (88.4%) were more likely than family members (41.9%) to be viewed as providing Social Participation. These results were replicated with data from the retest interview which were based on an entirely different set of network members.

Because of these apparent differences, separate scalogram analyses were conducted for family and non-family network members. The Coefficient of Reproducibility (Rep) is the principle index of scalability for scalogram analyses. A Rep of at least .90 is considered to be the accepted level for defining a scale of items with a hierarchical structure (Torgerson, 1967). Reps obtained from both the initial interview and the retest fell below .9. In short, there was no support for a hierarchical relationship among the support categories for individual network members. Instead, there was a fairly consistent pattern of low to moderate positive correlations between the various support categories.

### Discussion

The aim of the present study was to develop a reliable procedure for identifying members of a very specific social network—the social support network. Despite the marginal reliability of individual support categories, the strategy of identifying the total network through a series of name-eliciting questions led to a highly reliable index of network size. This finding largely replicates the results yielded by Jones and Fischer's procedures which served as a model for the present assessment strategy. Although for some support categories there was a tendency for subjects to name more network members during the retest interview (in comparison to the initial interview), the overall number of network members remained remarkably constant. Demonstrating that social support networks can be reliably identified was an important first step in the development of interview procedures for assessing these networks. Without this demonstration it would have been premature to include more elaborate methods for assessing additional structural variables (e.g., density). Certainly, these additional procedures could not be included in the continuing development of these measures.

The present report has not addressed the issue of whether network membership and the specific functions that members serve could be corroborated (validated) by the network members themselves. As a result, the networks that are produced by these self-report methods should be regarded as reflecting subjects' "perceptions" of their social relationships. In fact, the interview procedures were designed so that the perceived support network indices would represent subjects' cognitive appraisals of those individuals who they regard as potential providers of social support. Some have argued that it is an individual's subjective sense of belonging to a network of mutual obligation that accounts for the beneficial effects of social support (cf., Cobb, 1976). On the other hand, the indices associated with the actual support network are intended to represent events that could be corroborated. Previous research has indicated that sizable discrepancies occur when respondents' reports of their frequency of interacting with network members are compared to objective records (Killworth & Bernard, 1976) and when their ratings of the congruity of exchanges with network members are compared to those of the network members themselves (Shulman, 1976). Additional research is needed to determine the extent to which network members confirm subjects' reports of members actually providing at least one form of support during a preceding month.

Because the entire focus of this study was on the initial assessment of the measure's scale properties, a readily accessible sample of university students was used. The encouraging results on the scale's reliability suggest two important directions for its further development. First, there is a clear need to further evaluate the applicability of the assessment procedures with more heterogeneous samples of community residents. Initial indications are that the language used in the interview is straightforward and that the total time of administration (including additional ratings of need, satisfaction, and network conflict) is 15-30 minutes. The interview method thus appears feasible for use in survey research. Second, for community mental health researchers, the relationship between social support variables and psychological adjustment is a key topic. The present network measure might be considered for use in such studies to determine its relationship with adjustment measures.

As an example of potential applications of this instrument, I am currently conducting a study of pregnant teenagers in which the network measure, several scales of psychological adjustment, a measure of stressful life events, and additional measures of social support are being administered. The goal of this project is to investigate the role of social support (and conflict within support systems) in buffering the negative consequences of pregnancy in this high risk population. Because several approaches to assessing social support are being used, the project will also afford the opportunity to examine the interrelationships between indices of social support networks, qualitative measures of support (such as satisfaction), and a measure of the frequency with which individuals receive various natural helping behaviors. Hopefully this study will illustrate how the reliable assessment of social support networks can contribute to our understanding of the function and impact of natural helpers who exist in our communities.

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*REPLY TO KILLWORTH AND BERNARD**Muriel Hammer (New York State Psychiatric Institute)*

I was very pleased to see the response by Killworth and Bernard in the Summer issue of Connections (1980) to my earlier comments on the validity of network data (Hammer 1980a). (My comments were in part addressed to Killworth and Bernard's work on informant accuracy.) Although we apparently disagree on some of our interpretations, we do agree that the issues are of fundamental importance, and I appreciate the opportunity to clarify a few points. Let me first say that a lengthier analysis of these issues is called for; it will not be possible in this short note to raise all the methodological questions involved or to deal with the empirical reanalyses that seem warranted. I will confine my remarks here to considerations regarding the behavioral data as criterion, and regarding the analysis and interpretation of deviations from it.

The behavioral data as criterion

Both explicitly and implicitly Killworth and Bernard take the record of observed behavior to be absolutely correct, and any deviations from this to be inaccuracies.

If what we really want to know is who talked to whom how much this week, and we have an accurate record of this, then the assumption is unarguable. Generally, however, such an observational record is not what we are fundamentally looking for, but an indicator of what we are looking for -- something to do with the structure of the social transactions among a set of people, including any implications for future behavior -- and this is only partially revealed by any single set of data. An observational record of necessity leaves out of account events outside the times and places of observation. To the extent that these events have a real relevance to the social structure under study, the observational record is an inadequate indication of that structure. What, for example, is the impact of a missing connection -- one that was "there" last week but not this week -- on this week's set of connections? Does it leave some "trace" which is picked up in informants' statements but not in this week's observations? And if so, is it more or less "correct" to exclude it? If one reports talking to a close friend whom one did not talk to this week, it is indeed inaccurate for the week; but it may relate better to long-term behavior than would an accurate report for the time sampled period. In effect, the arbitrariness of the question may be more at fault than the inaccuracy of the answer.

As to the correctness of the observational record itself, it should be pointed out that behavior is not easy to record, and summations of behavioral events are not entirely straightforward. For example, if A is seen talking in the presence of B, C, and D, of whom only B is also seen talking, who is involved in the interaction? And is a dyadic exchange an equivalent unit to a conversation involving six people, or should it count for relatively more per dyad? And, again, what about the unobservable behaviors -- those that take place outside the setting under study? Two fraternity brothers may go out together for an evening, chalking up a lot of interactions that are not being counted by the observer in the fraternity house (Bernard, Killworth and Sailer 1980:196), but that are likely to affect the participants' judgments about their amount of interaction.

Furthermore, not only may informants' reports differ from observational data, but different sets of observational data on the same group may differ from each other. For one set of data (the office -- Bernard et al 1980:194), behavioral observations were made in two 4-day periods, seven weeks apart, and informant data on interactions "during a normal working day" were collected in the intervening period. The authors point out that the two observational records "...do differ significantly, but whether this is due to day-to-day fluctuation...or to a systematic time variation in the group cannot be answered easily." Which, then, is the "correct" behavioral criterion? The authors use the aggregate record, which is not unreasonable, but does not address two problems: First, if the behavioral records are significantly different from each other, how can they properly serve as the accuracy criterion for a third set of data? And second, if behavior does fluctuate or change systematically over time, how can any arbitrarily chosen period be taken as the absolute criterion for what is "normal" for that group? (I might add that analysis of several groups even over short time spans suggests that there are systematic changes over time -- see Hammer 1980b.)

Analysis and interpretation of deviations

In deriving a measure of accuracy for the reported data, some complex decisions must be made, particularly in the case of clique structure. Dividing a set of people into cliques is problematic, and different procedures yield markedly different clique structures, even for the same data (see Bernard et al, 1980, Table 5, p. 205). In addition, as discussed by the authors, the derivation of a measure of dissimilarity is not simple; the validation of any such measure should preferably be based on some external criterion, rather than on intuition. I do not mean to imply that their analyses are wrong, but only that the results of the clique analyses are too ambiguous to support the strength of their conclusions about informant data.

Bernard, Killworth and Sailer (1980:209) say that they "...have been unable to show...that cognition is related to behavior in any meaningful way whatever. We maintain that if cognition about a particular behavior does not relate to the behavior, it is unlikely to relate to anything else, either." But the cognitive data are significantly, though imperfectly, related to the behavior under study in the data they report and in my own data. In addition, we have some indication that the cognitive data are related to other behavior, such as relative communicability of speech (Hammer, Polgar and Salzinger 1969). It should be noted, in this regard, that some of our informant-derived measures correlate very poorly with relative communicability of speech, while some correlate very well. These are the same informants: differently formulated questions and different analyses of the answers yield more or less adequate cognitive data. Finally, informant-derived network data have been shown to be significantly related to a range of other phenomena, such as a number of physical and psychiatric disorders (see, e.g., Pilisuk and Froland 1978), and even mortality rates (Berkman and Syme 1979). Whatever these cognitive data may reflect, they cannot be dismissed as meaningless.

Killworth and Bernard (1980) discount the correlations between observed and reported data as being "of no use whatever in finding out who someone talked to." These significant correlations do, however, make it clear that the behavioral and cognitive data are by no means random with respect to each other, and it does not seem unduly optimistic to expect that there are rules governing the relationship between behavior and informants' reports, and that these rules may be discovered. Imperfectly though significantly correlated sets of data cannot of course simply be substituted for each other, but that they are "of no use whatever" is not the alternative conclusion.

Clearly, further analyses are called for of the factors that underlie the deviations between the sets of data -- including less arbitrary definition of the observational framework (particularly in terms of the time span), better formulated questions to informants, and investigation of the ways in which socially relevant cognitive processes restructure behavior. Killworth and Bernard state that "...we lay no blame for this problem [of inaccuracy] on informants. Faulty data are the product of researchers' decisions to use faulty instruments" (1980:22). I have no disagreement with this statement, or with the implication that researchers' procedures for eliciting network data from informants commonly lack rigor, and, especially, are inadequately tested against potentially validating criteria. The direction in which this should lead, however, is not the rejection of informant-derived data, but the rigorous development of better procedures, including a careful assessment of the kinds of questions informants in general, or categories of informants, can and cannot answer accurately.

Most importantly, I believe that while these authors' studies should be expected to stimulate and contribute to critical methodological and theoretical developments in this area, their conclusions may tend to discourage such work. There is potentially a great deal to be gained by systematic study of the ways these different sources of data correspond and differ, and what these correspondences and differences signify.

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# NEW BOOKS

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Mary Scott Welch. 1980. *Networking: The Great New Way for Women to Get Ahead*. New York: Harcourt Brace Jovanovich.

"Introduction--to a concept, a technique, a process that can help you get ahead in your chosen career, even if you don't need any help (yet). It can help you feel more comfortable and be more effective where you are, especially if you're 'playing hardball,' as the men say--if, that is, you're personally ambitious and professionally serious about your work.

"Magic? No, *networking*. As a concept, it can change your whole way of thinking about what it takes to succeed in business. As a technique, it will introduce you to stimulating, knowledgeable allies you didn't know you had. As a process, it knows no limits--and neither will you if you use it to its fullest potential.

"This book will show you how to network. It will show you how to do deliberately what men have always done without having to think about it--that is, develop and use your contacts. For inside information. For advice and ideas. For leads and referrals. For moral support when the going gets rough. Or just for someone to talk to in confidence, someone who understands what you're talking about without the need for a lot of background explanation of what it's like to be a woman working in a man's world.

"You've probably heard the system referred to as the 'old boys' network.' When a job opens, a contract goes out for bids, a stock splits, a story breaks, a rumor spreads, a war threatens--whatever--this 'old boy' calls that 'old boy' on the phone, or they meet for a drink or a game of golf, and before long some business gets done, to the satisfaction of both. Hundreds of other people may have been involved in the transaction, in one way or another--personnel departments, stockholders, trade associations, public relations assistants, secretaries, even bartenders--but it's the 'old boys' who will have maneuvered it. They'll have cut through all the resistance and red tape with ease, simply because they knew each other (or knew of each other) well enough to get in touch informally. The old boys' network may not be the *fairest* method of operation you ever heard of--it tends to leave out anyone who is not an 'old boy'--but it is certainly effective. It's worth study and, to a certain degree, emulation.

"And now women are creating their own version, at once an answer to being left out by the 'old boys' and a wonderful new way of relating to each other. The 'new girls' network,' as it is sometimes called, even by women who bristle at being called 'girls' in any other context, is springing up all over, growing almost faster than a reporter like me can keep up with it. From coast to coast, wherever the 43 million women now in the labor force are working, women are getting together to help each other get better jobs and/or to be more effective on the jobs they already have. That's what this book is all about. It's about what's happening, and why, and how you can get into the exciting new action." (From Introduction.)

Contents: 1. WHAT IS NETWORKING? Who needs it--and why? Are women networking only with other women? How does networking work? But aren't women supposed to mistrust each other? How are women getting to know each other?--In-house groups: Overground, Underground; Across company lines: Vertical, Horizontal; Multi-nets. Is networking difficult? 2. NETWORKING SUCCESS STORIES. How twenty-five women just like you have benefitted from the "new girls' network"--a sampling of how networking works. And a few *unsuccessful* stories--would networking have helped these loners? 3. SQUARE ONE. How to begin at the beginning, starting from wherever you are now in terms of your present job and degree of sophistication *re* networking. How to identify, where to find the women who belong in your personal but business-oriented network. How "Jean" is charting her network course from newspaper reporter to public relations executive. 4. PSYCHING YOURSELF UP. How network groups practice the networking technique. Questions and answers about networking talk: introducing yourself, taboos, asking questions, making dates, finances, telephoning. 5. THE MECHANICS. Keeping track of your network: how other women do it. 6. NETWORKING DOS AND DON'TS. Advice from effective networkers, including pointers learned the hard way. 7. CITY-WIDE NETWORKING GROUPS: HOW THEY STARTED. AGOG, in Minneapolis. Other "movers and shakers"--in San Francisco; Seattle; Bethlehem, Pennsylvania; New York City; Houston; Des Moines; Boston; Los Angeles; Baltimore. How networks spring out of seminars, classes, or counseling groups. And Conferences. 8. INTERNAL NETWORKS: TRIALS AND TRIBULATIONS. How Alina Novak created "Networks" at Equitable WCC--"with names changed to protect the 'guilty.'" The Women's Caucus at WGBH-Boston. Inside Polaroid. Other insiders, now going outside. "Big tickets." CWA. FEW. A state government network that grew and grew. The NBC story. Outside groups that help the insiders. Getting started. 9. FOURTEEN KNOTTY QUESTIONS. Shall we have a purpose beyond networking? Shall we be selective about membership? How shall we add new members? What kind of structure do we need? What format shall we follow for our meetings? How often shall we meet? Should we affiliate? What about men? What shall we call our group? Shall we have elections? How visible do we want to be? What about confidentiality? Could we use professional help? What about expenses? 10. HOLDING ON TO THE "HIGH." Programs and workshops. Actions and Projects.

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Carol Kleiman. 1980. *Women's Networks: The Complete Guide to Getting a Better Job, Advancing Your Career, and Feeling Great as a Woman Through Networking*. New York: Lippincott & Crowell.

1. Networking--what it's all about and why it's important to you;
2. Business Networks;
3. Professional Networks;
4. Support Networks;
5. Health and Sports Networks;
6. Political and Labor Networks;
7. Artistic Networks;
8. Informal Networks;
9. How to set up your own Network.

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Leslie Milroy. 1980. *Language and Social Networks*. Baltimore: University Park Press.

1. Language, class and community;
2. Obtaining data in the speech community;
3. Studying language in the community--the fieldworker and the social network;
4. The social context of speech events;
5. The quantitative analysis of linguistic data;
6. The language of the individual speaker--patterns of variation and network structure;
7. Conclusions and theoretical implications.

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Johannes M. Pennings. 1980. *Interlocking Directorates: Origins and Consequences of Connections Among Organizations' Boards of Directors*. San Francisco: Jossey-Bass.

"Interlocking directorates--wherein one individual serves on two or more corporate boards simultaneously, thus 'interlocking' those corporations--have long been a subject of controversy. Justice Louis Brandeis called them 'undemocratic' and a 'practice of many evils,' arguing that they tend to promote collusion between companies and diminish competition in the marketplace. Others have seen them as the mechanism whereby a powerful elite dominates political and economic decision making in this country. However, reliable information about the aims and consequences of these interorganizational ties has been scarce, and basic questions have gone unanswered. Who really benefits from interlocking directorates? What kinds of organizations are most likely to be involved? Do interlocks provide unfair advantages in the marketplace? Do interlocked companies make more money?

"To answer these and other key questions, Johannes Pennings reports the findings from a large-scale study of board ties among 800 of the largest American corporations, including industrial, financial, and service organizations. Major discoveries include the fact that, contrary to expectations, those companies most dependent on financial institutions for their capital needs have the lowest rate of interlocking; that board ties are most prevalent among firms belonging to highly concentrated industries; and that well-interlocked firms enjoy higher levels of sales and profitability. The information and analyses presented in this new book will be of interest not only to all those engaged in the study of organizations but to everyone concerned with government regulation and the policy implications of structural links among our giant corporations." (Publisher's blurb.)

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Samuel B. Bachrach (*Industrial and Labor Relations, Cornell*) and Edward J. Lawler (*Sociology, Iowa*). 1980. *Power and Politics in Organizations: The Social Psychology of Conflict, Coalitions, and Bargaining*. San Francisco: Jossey-Bass.

"The first three chapters lay the groundwork for a detailed examination of organizational politics. In Chapter One the authors critique the relevant literature, showing that analysis of organizations requires a new starting point--an understanding of organizational behavior grounded in research findings on power, coalitions, and bargaining. Chapter Two then analyzes three dimensions of power in organizations: the relational aspect (power is not an attribute of one individual or group); the dependence aspect (patterns of dependency create a context within which individuals and groups affect one another); and the sanctioning aspect (individuals in power must determine when sanctions will be effective). Chapter Three focuses on the content of power, distinguishing authority (which is stable, formal, and sanctioned) from influence (which is fluid, informal, and negotiable). Authority is shown to flow downward in a hierarchy, whereas influence can flow upward, downward, or horizontally. Most organizational politicking occurs within the realm of influence.

"Coalition activities are important because they can undermine, modify, or buttress the power relations established by the hierarchy of authority; these processes are examined in the next two chapters. Chapter Four shows how the authority structure of an organization constrains or facilitates formation of coalitions; for example, decentralized organizations are found to be amenable to coalitions. Chapter Five distinguishes special coalition politics from established interest group activities and goes on to analyze the conditions under which two interest groups will ally to create a new coalition. The basic issues that affect an interest group's decision to enter into a coalition are also spelled out.

"Relations among coalitions are best understood in terms of bargaining or negotiations; the next three chapters examine the implications of a bargaining approach. Chapter Six classifies various kinds of bargaining procedures and explains how the organizational structure affects both a coalition's selection of bargaining tactics and the likelihood of successful conflict resolution. Chapter Seven presents a general theory of bargaining (grounded in notions of power dependence) to facilitate predicting a coalition's selection of bargaining tactics and the likelihood of successful conflict resolution. Chapter Seven presents a general theory of bargaining (grounded in notions of power dependence) to facilitate predicting a coalition's choice of tactics and analyzing the dynamics of power struggles. Chapter Eight explores the role of coercion in bargaining, explaining why threats are the most critical aspect of coercion and demonstrating how the organization's power structure determines the ultimate success of threats and other coercive tactics.

Chapter Nine explicitly reveals the organization as an influence network and identifies the critical properties of such networks, including size, density, centrality, overloop, and dominance. The authors then provide a number of testable propositions designed to clarify the interrelations among organizational structure, work processes, and the various network properties they discuss." (Publisher's blurb.)

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Philip H. Burch, Jr. 1980. *Elites in American History: The New Deal to the Carter Administration*. New York: Homes & Meier.

"Burch's effort to trace the business ties of top federal officials throughout American history has produced evidence that the U.S. has long been an 'elitist-dominated nation' in which family and corporate wealth play major roles. In this 3rd volume of a projected 3-part study, Burch shows that the New Deal era saw more non-elite high federal appointments than any other in history. Carter has appointed a 'remarkable' number of elite figures, often under the influence of the Trilateral Commission and other probusiness interests. Scheduled for publication later this year: The Federalist Years to the Civil War; The Civil War to the New Deal." (Publishers Weekly.)

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Danielle Juteau Lee, ed. (Sociology, Ottawa). 1980. *Emerging Ethnic Boundaries*. Ottawa: University of Ottawa Press.

"This book focuses on the eminently social nature of ethnic boundaries. The authors examine the socio-economic factors which gave birth to ethnic boundaries, the institutions which maintain them, as well as their consequences for both the collectivities and individuals involved." (Multicultural Newsletter.)

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David Horton Smith (Sociology, Boston College), Jacqueline Macaulay and Associates. 1980. *Participation in Social and Political Activities: A Comprehensive Analysis of Political Involvement, Expressive Leisure Time, and Helping Behavior*. San Francisco: Jossey-Bass.

"How people spend their leisure time is one of the most important and most variable aspects of human behavior and has been the subject of hundreds of separate studies in various disciplines. This new 650-page book is the first to integrate the overwhelming masses of data that have resulted from those studies. It provides psychologists, sociologists, and political scientists with significant new knowledge on the patterns of human activities over the life span, elaborates a General Activity Model that explains the similarity as well as variability among different kinds of leisure behavior, and demonstrates how interdisciplinary study can be conducted and how it can increase understanding of human behavior. Combining a literature review of over 1800 sources and an overarching theoretical synthesis of the findings, this book will be a standard reference on human behavior for years to come.

"Part One describes the failure of social and behavioral scientists to apply interdisciplinary synthesis to the study of human behavior in general and leisure activities in particular--and the resulting fragmentation rather than accumulation of knowledge in most areas. To remedy this deficiency, Smith identifies the broad range of variables that must be considered to adequately investigate human behavior; suggests ways in which these variables relate to each other in determining leisure time use; and outlines an interdisciplinary research model.

"Parts Two, Three, and Four apply the ideas and approaches advanced in Part One to integrate knowledge on various kinds of leisure activities, ranging from television watching and outdoor recreation to political activism, religious participation, and volunteer work for the needy. Each chapter provides an extensive literature review on its topic, focusing on the six kinds of variables that are shown in Part One to be necessary for understanding human behavior: (1) contextual factors, such as historical trends and

characteristics of the physical environment; (2) social background and social role factors; (3) personality traits and intellectual abilities; (4) attitudes, values, expectations, and the like; (5) beliefs, images, plans, and other retained information; and (6) situational variables. In addition to summarizing research findings on these variables, the chapters evaluate the approaches and methods used in studying each variable and indicate areas where investigation has been inadequate.

"Part Five synthesizes the findings from Parts Two, Three, and Four to (1) identify underlying patterns common to the various kinds of leisure behavior as well as particular determinants of each kind of behavior; (2) elaborate a general theoretical model of leisure behavior that incorporates those patterns and variations; (3) demonstrate the usefulness of the research model followed in the book; and (4) expand and illustrate the model." (Publisher's blurb.)

Contents: 1. Methods of Inquiry and Theoretical Perspectives, David Horton Smith; 2. Determinants of Individuals' Discretionary Use of Time, David Horton Smith; 3. Political Socialization and Behavior, Karen Smith Dawson; 4. Conventional Political Participation, M. Lal Goel; 5. Unconventional Political Participation, Robert W. Hunt, M. Lal Goel; 6. Citizen Participation in Community Planning and Decision Making, Kurt H. Parkum, Virginia Cohn Parkum; 7. Leisure and Sport Socialization, John R. Kelly; 8. Participation in Outdoor Recreation and Sports, David Horton Smith; 9. Religious Socialization, Clyde W. Faulkner; 10. Nonassociational Religious Participation, Barbara Pittard-Payne; 11. Socialization for Mass Media Consumption, Leo W. Jeffries; 12. Participation in Mass Media Consumption, Leo W. Jeffries, John P. Robinson; 13. Socialization and Prosocial Behavior in Children, Ervin Staub, Helene K. Feinberg; 14. Altruism and Voluntary Action, Theodore D. Kemper; 15. Helping Behavior in Large-Scale Disasters, Russell R. Dynes, E. L. Quarantelli; 16. The Help Recipient's Perspective, Alan E. Gross, Barbara S. Wallston, Irving M. Piliavin; 17. Individual Philanthropy and Giving Behavior, Richard D. Reddy; 18. ISSTAL Model, David Horton Smith; 19. General Activity Model, David Horton Smith; 20. Future Direction in Theory and Research, David Horton Smith.

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*Sandra Schoenberg Perlman and Patricia L. Rosenbaum. 1980. Neighborhoods That Work. New Brunswick, N.J.: Rutgers University Press.*

"Writing in the tradition of the Chicago school of urban sociology, the authors seek to establish a basis for public policy through the qualitative analysis of neighborhood life and an interpretation of neighborhood research and field experience in neighborhood-based social intervention. They employ their observations of five poor and working class neighborhoods in St. Louis to explore: (1) the differences between 'socially integrated neighborhood that clearly control their social order and those that are merely a collection of streets' with few social functions, and (2) the linkages between neighborhood conditions and the distributors of public and private resources; linkages which they argue must be considered in any effort to stabilize or revitalize neighborhoods. They offer four propositions and related indicators that define viability in these lower income neighborhoods intentionally ignoring the dynamics of upper and middle income communities. The emphasis is on how residents attempt to gain control of neighborhood life." (NORG Bulletin.)

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*Mark Baldassare. 1979. Residential Crowding in Urban America. Berkeley: University of California Press.*

"This book used data from two recent national surveys to explore the social and psychological effects of residential crowding in an effort to develop more refined theories of the relationship between crowding and social patterns by disentangling the effects of factors such as life-cycle stage, dissatisfaction with housing, density and marital satisfaction from the effects of crowding." (NORG Bulletin.)

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*John Merriman, ed. 1979. Consciousness and Class Experience in Nineteenth-Century Europe. New York: Homes & Meier.*

"The wealth of insight and empirical data afforded by the social sciences is brought to bear on the tumultuous currents of change and continuity of the 19th century in this collection of essays in social history. From Peter Gay's psychological interpretation of the bourgeoisie to Charles Tilly's historical sociology of change, the contributors provide original and provocative perspectives on a crucial period in European history. Using the tools of interdisciplinary analysis, these case studies open our eyes to the concrete world of men and women members of the working, professional and bourgeois classes. How people perceived change in their traditional patterns of life and work and how they responded to it brings us closer to understanding the dynamics of the emergence of modern Europe.

"Other contributors to this volume are: Ronald Aminzade, Susanna I. Barrows, Christopher Johnson, Lynn Lees, John Merriman, Michelle Perrot, George Sherdan, and Frank M. Turner." (Publisher's blurb.)

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André Gunder Frank, 1980. *Crisis: In the Third World*, New York: Holmes & Meier,

"Frank systematically examines the complex and changing roles of Africa, Latin America, Asia and the Middle East in the world economic system. He analyzes the correlation between the growth of internal violence within and international conflict among 3rd World countries and the inroads of international capital." (Publisher's blurb.)

André Gunder Frank, 1980. *Crisis: In the World Economy*, New York: Holmes & Meier.

"Frank confronts the implications of today's critical economic and social problems: worldwide inflation, unemployment, the accumulation of wealth in a few countries, the long-term trend toward East-West economic collaboration. Interpreting developments in the 1960s and 70s as symptomatic of a major crisis in capital accumulation, he provides a perspective for the likely events of the 80s and beyond." (Publisher's blurb.)

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# THESIS SUMMARIES

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*AN ALGEBRAIC ANALYSIS FOR MULTIPLE, SOCIAL NETWORKS*

*Philippa Eleanor Pattison (D.Phil. Major Paper, University of Melbourne, June 1980).*

**ABSTRACT**

Procedures are advanced in the thesis for analysing the semigroup representation of structure in systems of social relations. Such systems may consist of multiple, social networks (Lorrain, 1975; Lorrain and White, 1971) or of blockmodels derived from multirelational network data (Boorman and White, 1976; White, Boorman and Breiger, 1976). The aim of the proposed analysis is to clarify the nature of the representation, as well as to enhance its potential usefulness, by making explicit the relational features upon which it depends. An underlying purpose is therefore also a general evaluative one.

The analytic procedure is developed in two parts. In the first stage, it is shown how any finite algebra may be described in terms of a minimal set of maximally independent simple homomorphic images, or *factors*, of the algebra. The definition of admissible sets of factors is made in relation to the congruence lattice of the algebra, and generalises the notion of an irredundant reduction in a modular lattice (for example, Birkhoff, 1967). An algorithm for determining all possible sets of factors of a given finite algebra is derived.

The second analytic stage consists in finding relational abstractions of a relational system consistent with a given homomorphic image of its semigroup and, in particular, of a given factor of its semigroup.

FORTTRAN routines implementing aspects of both analytic stages are included.

The resulting description of a relational system is in the form of a minimal but comprehensive set of small irreducible semigroups and the corresponding abstracted relational domains to which each semigroup pertains. Applications of the analysis to social relational systems of substantive interest are undertaken and it is argued that the procedure does assist the task of describing structure in a given multiple social network system. Further, the analysis suggests that the comparison of two different but comparable relational systems is facilitated, and so that greater power is given to the description of time-dependent multirelational data. In addition, it is demonstrated how the proposed analysis yields an implicit description of positions within social networks.

Finally, consideration is given to the role of the analysis in relation to some suggested extensions and variations of the basic representational scheme. It is argued that the representation affords an analytic power which extends its domain of practical and theoretical application.

*TABLE OF CONTENTS*

*CHAPTER I: Structure in Systems of Social Relationships: Rationale; Formal representations of the structure of social relationships; Some substantive issues in representing the structure of multiple, social networks.*

*CHAPTER II: The Semigroup Representation of Relational Structure in Multiple, Social Networks: A Formal Account: Introduction; The semigroup: a formal definition; Some alternative formal representations; The formal context of the representation; Evaluating the representation: the mathematical challenge.*

*CHAPTER III: Evaluating the Representation: Introduction; Relational systems with identical relational structure; Comparing relational systems; Discussion.*

*CHAPTER IV: Factorization: Representational complexity; Decomposing semigroups: construction rules; Factorization; Applications of factorization to semigroups; Other decomposition techniques; The role of factorization in the analysis of relational interlock.*

*CHAPTER V: Describing Relational Structure: A relational interpretation for homomorphic images; The correspondence definition; Application of the correspondence definition; Describing relational structure.*

*CHAPTER VI: Applications: Applying the factorization technique; Content and structure; Relational structure in two community elites; The robustness of the structural description of two community elites; The analysis of time-dependent relational data; The description of relational interlock.*

*CHAPTER VII: Extensions: Introduction; Blockmodels as intermediate constructions; Algebraic generalizations of structural equivalence; Theoretical extensions; Describing the topology of social structure; Applications of the methodology in other substantive domains; Conclusion.*

*REFERENCES, APPENDICES.*

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*THE STRUCTURE OF THE INDIGENOUS BUSINESS ELITE IN NOVA SCOTIA, 1900-1940**Donna Marie Rafuse Anthony (M.A. Sociology, Acadia University, August 1980).*

## ABSTRACT

This study maps the changing structure of corporate interlock among Nova Scotia based companies from 1900 to 1940. It attempts to assess the related changes in the degree of connectivity and the social composition of the indigenous business elite in the light of changing corporate structure during the same time period.

Outside capital continued to expand in the productive sphere in Nova Scotia during the period, further consolidating the coal mining and industrial sectors of the economy. At the same time, indigenous capital contributed to its own cohesion and truncation by concentrating in, and consolidating, the financial and utilities sectors while offering no effective resistance to the takeover of the productive sectors.

The structural pattern of elite formation during the period indicates changes in its size and characteristic features are related to the changing corporate structure. The high degree of connectivity between companies and changes in the pattern of interlocking directorships was directly reflected in the cohesiveness, and in the social composition of the indigenous business elite of the period.

*THE STRUCTURE OF INTERACTION IN FIVE SYMLOG GROUPS: A BLOCKMODEL STUDY OF CORES AND PERIPHERIES**James George Ernis (D.Phil., Social Psychology, Harvard University, May 1980).*

## ABSTRACT

This study uses two recent developments in modelling social structure to characterize the organization of five self-analytic groups. The first, Bales' SYMLOG, models an interpersonal field and locates persons within it based on their characteristic behaviors. The second, blockmodel analysis, employs a set of algebraic methods for aggregating individuals into structurally similar subgroups, examining the patterns of relations among these aggregates, and characterizing the differences among different types of relations themselves. Blockmodel analysis is used here to operationalize the structure of interactions of group members, while SYMLOG is used as an external, interpretive frame to identify the characteristics of role occupants and axes of differentiation among subgroups. Analyses of systematic observations of six distinct types of interaction revealed a structural pattern of core versus periphery in each group. Within a given group, core and periphery occupied distinct locations within the SYMLOG field, but the locations of core and periphery varied by group. Examination of these differences indicated two varieties of structural differentiation, one based on dominance versus submissiveness of members, the other based on analytical versus emotional orientations. These modes of differentiation are related to striking differences among groups in the network structure of different types of interaction, especially of positive sentiment. The bases of these differences are considered along with their implications.

*THE POLITICAL ECONOMY OF ELEMENTARY EDUCATIONAL DEVELOPMENT: COMPARATIVE PERSPECTIVES ON STATE SCHOOLING IN UPPER CANADA**Bruce Curtis (D.Phil., Sociology, University of Toronto, 1980).*

## TABLE OF CONTENTS

## INTRODUCTION

CHAPTER I: Enlightenment and Conspiracy: Towards a Political Economy of Educational Reform.

CHAPTER II: Uneven Educational Development.

CHAPTER III: The Context of Educational Reform: Elementary Educational Development in England, the United States and Ireland to 1850.

CHAPTER IV: Political Conflict and Educational Development in Upper Canada, 1791-1837.

CHAPTER V: "Responsible Government" in the Canadas and the Development of State Control over Education, 1838-1850.

CHAPTER VI: The State and State Schooling.

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# SPECIAL JOURNAL ISSUES

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Abstracts from SOCIAL NETWORKS 2 (No 3), 1980

BERNARD, H. Russell (Florida), Peter D. KILLWORTH (Cambridge) and Lee SAILER (Pittsburgh). "Informant Accuracy in Social Network Data IV: A Comparison of Clique-Level Structure in Behavioral and Cognitive Network Data."

This paper examines whether clique-structure in cognitive data (i.e. recall of who one talks to) may be used as a proxy for clique-structure in behavioral data (i.e. who one actually talks to). The answer to this question is crucial to much of sociometric and social net-theoretic studies of social structure.

We analysed the clique structures of the communication patterns of four naturally occurring groups of sizes 34 to 58, whose actual communications could easily be monitored, together with the groups' perceptions of their communications. The groups used were: radio hams, a college fraternity, a group of office workers, and an academic department. The analysis used clique-finding, block-modelling, and factor-analytic techniques, all employed in such a way as to maximize the accuracy of the cognitive data.

After defining a way to compare clique structures between behavioral and cognitive data, we found that there was no useful relationship between the two, and furthermore there was no significant difference in performance between any of the structure-finding algorithms. We conclude that cognitive data may not be used for drawing any conclusions about behavioral social structure.

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CARRINGTON, PETER J., Greg H. HEIL and Stephen D. BERKOWITZ (Toronto). "A Goodness-of-Fit Index for Blockmodels."

The 'fit' between blockmodels and data networks is extended from a binary to a continuous concept. An index of goodness-of-fit for  $\alpha$ -fit blockmodels is proposed, based on the purity (density of 1's or 0's) of the submatrices of the data matrix(es) after the blockmodel partition is imposed. The characteristics of this index are compared with those of correlation coefficient. Some applications are described.

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DOREIAN, Patrick (Pittsburgh). "On the Evolution of Group and Network Structure."

The evolution of the structure of a social group through time is described. The procedures employed to do this are based on algebraic topological notions and this structural language is shown flexible enough to describe structural change. The description of structural change raises the issue of explaining these structural changes. However, the data used here are not rich enough to permit the explanation of the changes described. This points to the need to couple data collection, theoretical analysis and methodological procedures for network analysis in real time, or to have a body of data rich enough to return to for clarification and answers whenever structural changes through time are delineated and require explanation. This will have to be done within a dynamically orientated framework.

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GOULD, Peter (Pennsylvania State) and Anthony GATRELL (Salford). "A Structural Analysis of a Game: The Liverpool v Manchester United Cup Final of 1977."

A team is more than the sum of its individual players, and so implies a structure of relations on the set. The  $q$ -analysis, or polyhedral dynamics, of Atkin is chosen to define and operationalise intuitive notions of structure in a soccer match between Liverpool and Manchester United. The injection of  $q$ -holes, or obtrusive objects, by the defense of one team appears to contribute to the fragmentation and loss of the other.

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CAPOBIANCO, Michael F. and John C. MOLLUZZO (St. John's). "The Strength of a Graph and its Application to Organizational Structure."

The strength of a point in a graph is defined as the increase in the number of connected components in the graph upon removal of the point. Given an ordering of the points of a graph, the strength vector  $S$  of the graph is the vector whose  $i$ th component is the strength of the  $i$ th point of the graph. An algorithm for computing  $S$  is presented. The strength of a graph is then defined and applied to the analysis of simple intra-organization mergers.

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DIJKSTRA, Wil (Free University, Amsterdam). "Response Bias in the Survey Interview; an Approach from Balance Theory."

A balance theoretical approach to the phenomenon of response bias in survey research is developed. This approach yields a model of the survey interview, specifying the effects of a great number of interview variables. In this way, different types of investigations concerning the quality of data gathered by means of interviews could be incorporated into a single framework. In addition, it is shown how a mathematical formulation of the theory may be developed, and how predictions from the model may be deduced and verified.

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From: CANADIAN REVIEW OF SOCIOLOGY AND ANTHROPOLOGY 17, no.3 (August) 1980.

Special issue on "Dependency, Underdevelopment and Regionalism."

Contents:

VELTMAYER, H. "A Central Issue in Dependency Theory."

STEVENSON, P. "Accumulation in the World Economy and the International Division of Labour."

SACOUMAN, R. J. "Semi-proletarianization and Rural Underdevelopment in the Maritimes."

LÉGENDRE, C. "Le Développement et Les Organisations: Le Destin des Entrepreneurs Forestiers."

KNUTTILA, K. M. and James M. McCORRIE. "National Policy and Prairie Agrarian Development: A Reassessment."

McCORRIE, James. "Preface."

An elementary acquaintance with the pattern and struggles of Canadian history is a sufficient reminder that regions and the relationships between them have been a central feature of the historical record. First, there were the colonial empires of the French, and then those of the British. They were followed by the loss of empire by the French, the unsuccessful struggles of the British North American colonies to adjust to industrialization in nineteenth-century Britain, Confederation, 'national policy,' American imperialism, in the late nineteenth and twentieth centuries. With each stage the growth and development of one region became tied and/or subordinated to the development of another.

Sociologists concerned with the study of Canadian society have, by and large, remained indifferent to an historical perspective. Clark's (1939) plea of some forty years ago has gone unheeded. Not surprisingly, the lessons to be gleaned from the historical record have escaped the profession, and a concern with the study of regions, regional relationships, dependency and uneven or underdevelopment has not, with some notable exceptions (Clark, 1962; Davis, 1971), occupied our attention.

Within the last ten years, this gap has been broached in a much more concerted and systematic way than has heretofore been the case (e.g. Brym and Sacouman, 1979; Clement, 1978; Cuneo, 1978; Matthews, 1977). In this special issue of the *CRSA*, an attempt is made to enlarge on a promising beginning, and contribute to what has been a sadly neglected realm of study.

In the first part, Veltmeyer offers an overview of dependency theories of capitalist underdevelopment. Divergence rather than convergence in interpretation has been the rule; this point is very much in evidence in this issue. Veltmeyer identifies the various formulations of dependency theory and reviews the major debates surrounding its central proposition -- namely, the impact of foreign investment and trade on the structure of production and socioeconomic growth.

Stevenson examines the theoretical and empirical aspects of underdevelopment in the modern world by focusing on diffusionists and on dependency traditions of inquiry. He argues that the empirical evidence tends to indicate that foreign penetration of the Third World has led to and maintained its underdevelopment. The prime objective of capitalists is to extend their mechanisms of accumulation throughout the globe, leaving their imprint on nations, regions, and classes. The process of global penetration is dynamic and continuously in a state of flux, permitting limited forms of industrial expansion and urbanization in some underdeveloped societies.

In a third article, Sacouman proposes that the underdevelopment of the rural Maritimes over the last century has been based largely on the structural articulation of the domestic mode of petite, primary production and capitalism. Domestic relations of production have been subject to a process of semi-proletarianization -- the conversion of productive members of the family unit into seasonal, indirect wage labourers, held in reserve, but exploited as and when required. This analysis of changes in petite primary production, it is claimed, allows for a reanalysis of the rural Maritimes as not merely peripheralized holding areas for capitalist development elsewhere, but also as increasingly important centres of militant, non-populist protest and social movements.

The absence, until recently, of French Canadians from positions of leadership and control in the economic development of the province of Quebec is generally acknowledged. The historical mechanisms of exclusion are less well known. In a case study of one of the principal resources in the province, Legendre analyses the traditional middleman role played by the forest contractors in the development of the pulp and paper industry. He describes the mechanisms which made it difficult, if not impossible, for the great majority of forest contractors to accumulate the financial, technological and organizational, social and cultural 'capital' necessary to free themselves from their role as dependent intermediaries and to become a class of local capitalists, able to play an independent, innovating role in the development of the industrial sector.

Finally, Knuttila and McCrorie reexamine the relationship between the development of rural, agrarian communities in the prairie region, and industrialization in the central provinces and the United States. They suggest that an earlier period of agrarian growth and expansion is dialectically related to a more recent period of farm enlargement, capital concentration, and decline in the number of rural communities. The paradoxical equation of growth and expansion turning into the opposite is examined in terms of class formations and struggles within and beyond the prairie region.

The second part contains two review essays. The first, by Barrett, critically summarizes and evaluates dependency literature on the Maritimes. The second, by Roberts, examines the issues of region, class, and the role of the state in capitalist development with respect to two recent studies which bear on the history of and recent changes in the socioeconomic development of the Prairies.

Abstracts from JOURNAL OF GRAPH THEORY 4 (No.3) Fall, 1980.

GROSS, Jonathan L. (Columbia) and Frank HARARY (Michigan). "Some Problems in Topological Graph Theory."

A list of 31 problems presented here reflects some of the main trends in topological graph theory.

JAUDEKAR, MEDHA (Bombay). "Note on Choudum's 'Chromatic Bounds for a Class of Graphs.'"

If a graph  $G$  has no induced subgraph isomorphic to  $K_{1,3}$ ,  $K_5 - e$ , or a third graph that can be selected from two specific graphs, then the chromatic number of  $G$  is either  $d$  or  $d+1$ , where  $d$  is the maximum order of a clique in  $G$ .

MYNHARDT, C. M. (South Africa) and BROERE, I. (Rand Afrikaans). "G-Constructibility of Planar Graphs."

In this paper, the concept of the  $G$ -constructibility of graphs is introduced and investigated with particular reference to planar graphs. It is conjectured that the planar graphs are minimally  $N$ -constructible, where  $N$  is a finite set of graphs and an infinite set  $G$  is obtained such that the planar graphs are also minimally  $G$ -constructible. Finally, some properties of the set of all  $N$ -constructible graphs are discussed and compared with the corresponding properties of planar graphs.

VIDYASANKAR, K. (Memorial). "Covers and Strong Covers in Directed Bipartite Graphs."

Let  $G$  be a finite graph with directed bipartition  $(V^+, V^-)$ . Necessary and sufficient conditions are given for the existence of covers and strong covers that: (i) satisfy matching with respect to  $V^+$ , and (ii) include a given set of edges that satisfies matching with respect to  $V^+$ .

ZAMFIRESCU, Tudor (Dortmund). "Three Small Cubic Graphs with Interesting Hamiltonian Properties."

We present here three graphs, which are the smallest known ones of their kind: a cubic three-connected planar nontraceable graph, a cubic three-connected planar graph which is not homogeneously traceable, and a cubic one-Hamiltonian graph which is not Hamiltonian connected.

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FAUDREE, R. J., C. C. ROUSSEAU and R. H. SCHELP (Memphis State). "All Triangle-Graph Ramsey Numbers for Connected Graphs of Order Six."

The Ramsey numbers  $r(K_3, G)$  are determined for all connected graphs  $G$  of order six.

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SIPKA, Timothy A. (Alma College). "The Orders of Graphs with Prescribed Degree Sets."

The degree set  $D_G$  of a graph  $G$  is the set of degrees of the vertices of  $G$ . For a finite nonempty set  $S$  of positive integers, all positive integers  $p$  are determined for which there exists a graph  $G$  of order  $p$  such that  $D_G = S$ .

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YAP, Hian Poh (Singapore). "On the Critical Graph Conjecture."

Gol'dberg has recently constructed an infinite family of 3-critical graphs of even order. We now prove that if there exists a  $\rho(\geq 4)$ -critical graph  $K$  of odd order such that  $K$  has a vertex  $u$  of valency 2 and another vertex  $v \neq u$  of valency  $\leq (\rho+2)/2$ , then there exists a  $\rho$ -critical graph of even order.

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ASANO, Takao and Takao NISHIZEKI (Tohoku) and Takahiro Watanabe (Toshiba Corporation). "An Upper Bound on the Length of a Hamiltonian Walk of a Maximal Planar Graph."

A Hamiltonian walk of a connected graph is a shortest closed walk that passes through every vertex at least once, and the length of a Hamiltonian walk is the total number of edges traversed by the walk. We show that every maximal planar graph with  $p(\geq 3)$  vertices has a Hamiltonian cycle or a Hamiltonian walk of length  $\leq 3(p-3)/2$ ,

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BERMOND, J. C., A. GERMA, M. C. HEYDEMAN and D. SOTTEAU (Paris Sud). "Girth in Digraphs."

For an integer  $k > 2$ , the best function  $m(n, k)$  is determined such that every strong digraph of order  $n$  with at least  $m(n, k)$  arcs contains a circuit of length  $k$  or less.

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Abstracts from NETWORKS 10 (Fall), 1980.

CUTLER, M. (Weizmann Institute of Science, Rehovot). "Efficient Special Case Algorithms for the N-Line Planar Traveling Salesman Problem."

The traveling salesman problem, path, or cycle is NP-complete. All known exact solutions to this problem are exponential. In the  $N$ -line planar traveling salesman problem the points are on  $N$  lines in the plane. In this paper, simple and efficient low-degree polynomial solutions are given to some  $N$ -line ( $N=2, 3$ ) planar traveling salesman problems using dynamic programming. Such problems arise in practical applications, for example, connecting nets in printed circuits.

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WEINTRAUB, Andrés and Jaime GONZÁLEZ (Universidad de Chile). "An Algorithm for the Traffic Assignment Problem."

An optimization algorithm for the traffic assignment problem is presented. It is based on determining, for the flow corresponding to each origin at a time, a set of disjoint circuits with the most negative total marginal cost, followed by a unidimensional optimization along these circuits. The proposed method was

compared to other well known approaches on randomly generated networks. In most cases the proposed method proved to be highly efficient, particularly when appropriate tighter stopping rules were used. In this sense, it was seen that when stopping rules were based on insufficiently tight tolerances, substantial errors could appear in the equilibrium traffic assignment.

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COCKAYNE, E. G. (Victoria), R. M. Dawes (Oregon) and S. T. Hedetniemi (Oregon). "Total Domination in Graphs."

A set  $D$  of vertices of a finite, undirected graph  $G=(V,E)$  is a total dominating set if every vertex of  $V$  is adjacent to some vertex of  $D$ . In this paper we initiate the study of total dominating sets in graphs and, in particular, obtain results concerning the total domination number of  $G$  (the smallest number of vertices in a total dominating set) and the total domatic number of  $G$  (the largest order of a partition of  $G$  into total dominating sets).

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KLEINROCK, Leonard (U.C.L.A.) and Farouk KAMOUN (Tunis). "Optimal Clustering Structures for Hierarchical Topological Design of Large Computer Networks."

Large packet switching computer networks on the order of hundreds or thousands of nodes will soon emerge to handle the fast-growing demands in data communication and resource sharing among various information processing systems around the world. The network topology design problem has long been recognized as extremely complex and very quickly becomes unmanageable as the size of the network increases. Existing heuristic design procedures are quite efficient for the design of small to moderate-sized networks (25-75 nodes); however, they become very costly and even prohibitive when dealing with large networks. A design methodology based on the hierarchical clustering of the network nodes is presented in this paper in order to alleviate the computational cost involved in the design. More specifically, the emphasis is on the determination of a *clustering* structure which minimizes the computational cost of the design. Such a cost is assumed to have a polynomial growth with the number of nodes in the subnet to be designed. We present optimum results both for the number of clusters, number of superclusters, etc., and for the number of hierarchical levels. An expression for the average delay of a message in such a hierarchical network is also provided in terms of the average delays in the subnets composing the network. This decomposition leads to the design of smaller subnetworks for which we can utilize present design strategies.

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TAKIMIZAWA, K., T. NISHIZEKI and N. SAITO (Tohoku University, Sendai). "An Algorithm for Finding a Short Closed Spanning Walk in a Graph."

A Hamiltonian walk of a graph is a closed spanning walk of minimum length. In this paper we generalize a Dirac type sufficient condition ensuring the existence of a Hamiltonian cycle to one ensuring the existence of a closed spanning walk of length less than a specified value. Furthermore, we present an  $O(p^2 \log p)$  algorithm for finding such a closed spanning walk in a graph with  $p$  vertices satisfying our condition.

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MINIEKA, Edward (Illinois). "Conditional Centers and Medians of a Graph."

Previous treatments of location problems on a graph have been confined to the optimum location of a single facility or the simultaneous optimum location of multiple facilities. This paper addresses the problem of optimally locating a facility on a graph when one or more other facilities have already been located in the graph. This paper shows that previous solution techniques can be reused if the distances in the graph are judiciously redefined.

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HARARY, Frank and Jerald A. KABELL (Michigan). "Monotone Sequences of Graphical Invariants."

We investigate the extent to which certain graphical parameters can vary in successive point-deleted subgraphs. In particular we identify one group of invariants which can be made to conform to an arbitrary monotone nondecreasing sequence and another group to a given nonincreasing sequence. Curiously, the two sets are not disjoint, as the line connectivity is in both. Finally we determine the most general sequences which can appear in this context.

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# ABSTRACTS

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A Semi-Debate on Semi-Groups excerpted from the AMERICAN JOURNAL OF SOCIOLOGY 86 (July, 1980).

BONACICH, Philip (UCLA). "The 'Common Structure Semigroup,' a Replacement for the Boorman and White 'Joint Reduction.'" pp.159-166.

Some procedure for finding the common principles in a set of semigroups is essential in blockmodeling. However the technique suggested by Boorman and White exhibits 2 problems: First, their joint reduction does not always exist. Second, it does not do what it purports to do. The joint reduction that Boorman and White propose is actually closer to the least common multiple than to the greatest common divisor because it is the union of all the principles contained in the 2 subgroups rather than their common intersection. Moreover, the joint reduction will contain implications contradicted by both semigroups.

This comment proposes a 'common structure semigroup' that has neither of these problems. The common structure semigroup of 2 or more semigroups is the semigroup corresponding to their meet in the lattice of congruence relations. This semigroup has only those equations that are present in all the initial semigroups. Moreover, this semigroup always exists, which is not true for the joint reduction.

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BOORMAN, Scott (Yale) and Phipps ARABIE (Illinois). "Reply to Bonacich." pp.166-173.

(Bonacich's) structure seems formidably complex and relatively unenlightening, at least when considered as it stands without any gain from adhering to a structure so complex. Indeed, one suspects that any initial preference for working with the intersection instead of the union of blockmodel algebras may tend to be quixotic in practice, since some sort of reduction will be necessary before substantive interpretation may proceed.

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WHITE, Harrison (Harvard). "Concerning Another Response." p.175.

Another response of some length, focusing more closely on the algebraic issues Bonacich raises and entitled 'Equating the "Joint Reduction" with Blockmodel Role Structure: A Reply to McConaghy' has been written by Phillippa E. Pattison (Sociological Methods and Research, in press). See also Pattison's thesis, summarized in this issue of CONNECTIONS.

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AHLBRANDT, Robert S., Jr. 1980. "The Community Question and the Role of Place." Paper presented to the American Political Science Association Meetings, Neighborhood Organization Research Group Panel, Aug. 30.

This paper analyzes the Community Question from both a territorial and network perspective. The territorial approach uses neighborhoods as the relevant locality and analyzes attachment to place in terms of institutional ties, neighboring, organization involvement, neighborhood friends, kin and affective sentiments. People's networks are examined in terms of their intimate ties; the most important individuals in the network are identified and analyzed in the context of their relationship to the respondent and place of residence.

The research discussed in this article provides strong evidence in support of community without proximity or other conceptualizations of community which extend beyond the neighborhood and are based upon primary ties with a wide variety of personal contacts, which include kin but encompass non-kin as well.

The local community or neighborhood is still important for a number of uses and for a number of different groups of people. The neighborhood provides its residents with a variety of services--almost half of the respondents use facilities for shopping and/or religious, health and recreational services in or near their place of residence. Neighboring activities are important for almost half of those interviewed and almost all respondents believe they could turn to neighbors if an emergency arose.

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BARON, James N. and William T. BIELBY (California - Santa Barbara). 1980. "Bringing the firms back in: stratification, segmentation, and the organization of work." *American Sociological Review* 45 (October): 737-765.

This essay examines the shift toward "structural" explanations in recent studies of inequality. After reviewing this body of research and some of its shortcomings, we examine its theoretical underpinnings, comparing "structuralist" perspectives on work organization derived from institutional economics and neo-Marxism to more orthodox accounts based on neoclassical and "industrialism" theories. This discussion suggests areas where the different perspectives overlap and diverge. We conclude that work arrangements within the firm and their trend are the focus of most "structural" perspectives on positional stratification; thus, empirical studies grounded at the organizational level are more likely to inform current debates about the "structure of work" than is the growing body of research about structural effects on individual attainment or covariation among industrial/occupational characteristics. Toward that end, an agenda for future research is outlined, focusing on three aspects of work organization: (a) the units which comprise the structure of work and the dimensions underlying economic segmentation; (b) the effects of sectoral differentiation on technical and administrative arrangements within firms; and (c) temporal changes in how enterprises organize production. We provide some illustrations of the kinds of empirical data and research hypotheses required to link research on segmentation and stratification more closely to studies of organizations.

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BOORMAN, Scott (Yale) and Paul LEVITT (Harvard). 1980. "The Comparative Evolutionary Biology of Social Behavior." *Annual Review of Sociology* 6: 213-234.

We focus on the evolutionary core of the subject--the evolutionary analysis of social behavior--applying and extending the methods of modern population genetics, ecology and demography. The field contains two separate but closely related levels of analysis: an abstract level, couched in the mathematical models of genetics, ecology and demography, which addresses the central theoretical problem of defining circumstances under which evolution will favor sociality of different types; and a concrete level, which deals with problems in the evolutionary history of particular species or sets of species, including cases of both successful and blocked social evolution. [The authors note that] Schulman has applied blockmodel methods to analyzing multiple social as well as kinship networks in large nonhuman primate groups of over 100 individuals. The potential exists for a cross-fertilization of sociobiological theory with recent [network analytic] developments in the analysis of human social structure.

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BREIGER, Ronald, (Harvard). 1981. "The Social Class Structure of Occupational Mobility." *American Journal of Sociology*, in press.

This paper provides an analytical framework within which hypotheses of class structure are brought to bear directly in the formulation of models for the occupational mobility table. The proper aggregation of rows and columns is portrayed as the fundamental theoretical issue in mobility table analysis, rather than as an exogenous "given" to be decided upon prior to the construction of explicit models. Homogeneity of mobility within and between classes, class hierarchy, and tangible boundedness are the central themes. These themes are implemented in loglinear models, and applied in the analysis of large (seventeen-category) intergenerational mobility tables. Four such tables from the studies of Blau and Duncan (1967) and Featherman and Hauser (1978) are fitted acceptably. Seven falsifiable hypotheses about the social class structure of occupational mobility are identified and assessed comparatively within the new framework.

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BURT, Ronald (California - Berkeley). 1980. "Models of Network Structure." *Annual Review of Sociology* 6: 79-141.

A loose federation of approaches, professing on many fronts as a result of the efforts of many persons, is currently referenced as network analysis. My effort here to discuss these separate fronts without forcing them into a single perspective is not intended to encourage past parochialisms. By making distinctions among separate approaches, I hope to highlight their conceptual complementarity so as to make more apparent their relative strengths.

Models of network structure provide the optimal device for capturing abstract concepts of social differentiation in empirical research. The adequacy of alternative network models is contingent on one's purpose in describing network data.

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BURT, Ronald (California - Berkeley), Kenneth P. CHRISTMAN (California - Berkeley) and Harold C. KILBURN, Jr. (SUNY - Albany). 1980. "Testing a Structural Theory of Corporate Cooptation: Interorganizational Directorate Ties as a Strategy for Avoiding Market Constraints on Profits." *American Sociological Review* 45 (October): 821-841.

Moving away from description of directorate ties as a cooptive device, we test a theory explicitly predicting cooptive uses of corporate directorates from the structure of the market in which firms operate. The theory is based on a network model of structural autonomy. It takes as exogenous information the sales and purchase transactions between establishments in sectors of the economy, locates those sectors most constraining pricing discretion within each sector, then predicts where establishments should be connected by interorganizational relations if such relations are intended to coopt market constraints. Using data on interorganizational relations as directorate ties (establishments connected through corporate boards by ownership, direct interlocking, and/or indirect financial interlocking) in the 1967 American economy, we find the theory's predictions to be accurate. Each of the three types of directorate ties tends to occur where there is market constraint and tends not to occur in the absence of constraint. Further, the three types of ties are coordinated as multiplex directorate ties. Where establishments in one sector constrain those in another, there is a strong tendency for all three types of directorate ties to exist between the two sectors. Where there is no such constraint, all three tend to be absent. Support is weaker for intrasector in comparison to intersector cooptation via directorate ties. Whatever the cooptive intent of the directorate ties described, they are patterned as if they were intended to coopt market constraints on corporate pricing discretion.

COWELL, Robert L. (International Rice Research Institute) and Rolf T. WIGAND (Arizona State). 1980. "Communication Interaction Patterns among Members of Two International Agricultural Research Institutes." Paper presented to the Organizational Communication Division, International Communications Association Convention, Acapulco.

Twenty-eight senior staff members at the Asian Vegetable Research and Development Center (AVRDC) and 60 senior staff members at the International Rice Research Institute (IRRI) were surveyed regarding the frequency and importance of their work-oriented face-to-face, telephone, and written communication. Analyses of the communication networks show that AVRDC emphasizes face-to-face interaction, while IRRI gives greater relative attention to the telephone and writing. Both centers have organizational structures and use communication mechanisms that enable the staffs to function effectively in research tasks requiring intense cooperation and coordination. Network and statistical analyses suggest that staff size is an important factor in determining which channels serve communication needs best, while also influencing the mechanisms that keep communication frequency within tolerable limits.

DICKENS, Wanda J. and Daniel PERLMAN (Manitoba). 1980. "Friendships Across the Life Cycle." To appear in S. Duck and R. Gilmour (eds.) *Developing Personal Relationships*. London, Academic Press.

In the present chapter, we will examine friendship patterns from a life cycle perspective. As we shall demonstrate, people's friendships are clearly influenced by their stage in life. Friendship expectations change, network sizes change, and the functions of friendship change. The importance of various antecedents (i.e., propinquity) of friendship as well as the specific operation of fundamental influences on friendship formation may change. For instance, in Duck's (1975) research, personal similarity promoted friendship through adolescence but the relative importance of various dimensions of similarity (i.e., physical, psychological, etc.) showed developmental changes.

The primary purpose of this chapter is to integrate information on friendship across the life cycle from diverse sources. In 1972, Beth Hess (p.360) wrote "Little is known about the age patterns of friendship, either at a given time or over the life course." More is known now, of course, but the state of our knowledge hasn't changed dramatically. The volume of relevant work is still surprisingly small. Thus, this review can be considered fairly comprehensive rather than highly selective.

The chapter attempts to blend evidence together with theory. Greater weight is given, however, to descriptive evidence. Very few theories have been articulated to explain friendship across the life cycle. Of the theories that have been advanced, most either focus on only one stage in life (i.e., Bigelow, 1977), or have yet to serve as the basis for programmatic research (Kimmel, 1979). The development of a comprehensive theory is beyond either the scope or the intent of the present chapter.

One might assume that changing friendship patterns are caused by developmental changes per se. We have not made this assumption. Instead, we consider it a question to be answered. It is equally plausible that changing friendship patterns are caused by some third set of factors that are linked to chronological development. We should also note that the relationship of development to friendship is not a one-way stream: an individual's friendships undoubtedly influence their development.

The chapter is divided into four major sections: childhood, adolescence, adulthood, and old age. Throughout the chapter, attention will be focused on gender. In examining friendship in adulthood and old age, attention will also be focused on socioeconomic status and such age-linked life events as marriage, parenthood, and becoming widowed. We believe these factors play an important role in the patterning of friendships across the life cycle. Finally, to provide a more complete picture of people's social relations, some attention will be given to people's contact with their relatives.

EVANS, Peter B. (Brown) and Michael TIMBERLAKE (Memphis State). 1980. "Dependence, Inequality, and the Growth of the Tertiary: A Comparative Analysis of Less Developed Countries". *American Sociological Review*, 45 (August): 531-552.

High levels of economic inequality found in less developed countries have been attributed to the penetration of their economies by investments of multinational enterprises based in more developed nations of the West. This attribution has been widely supported by both historical and quantitative research. There are several interpretations concerning why this might be so, but the one offered here is that foreign investments cause high levels of inequality by distorting the evolution of the labor-force structure. It is suggested that Third World economies penetrated by foreign capital will have unusually rapidly growing proportions of the labor force employed in the tertiary, and it is growth of this proportion which mediates some of the effects of dependence on inequality. Our quantitative analysis of cross-national data (a) corroborates previous research linking dependence to inequality, (b) indicates that dependence is associated with growth of the tertiary, and (c) suggests this is one important link between dependence and inequality.

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FEAGIN, Joe R. (Texas - Austin) and Douglas Lee ECKBERG (Tulsa). 1980. "Discrimination: Motivation, Action, Effects and Context." *Annual Review of Sociology* 6: 1-20.

As yet the social science literature contains no sustained theoretical treatment of [racial] discrimination. This review examines social science research and theory related to the concept of discrimination. [The review concludes that] social scientists must now focus intensively on long-neglected aspects of discrimination: the discriminatory actions themselves and their institutional and societal context.

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FRANK, Ove (Lund). 1978. "Estimation of the Number of Connected Components in a Graph by Using a Sampled Subgraph." *Scandinavian Journal of Statistics* 5(4): 177-188.

The number of connected components in an unknown parent graph is to be estimated by using a samples subgraph. This problem is first discussed for two kinds of parent graph: a transitive graph and a forest. Some approaches pertaining to a general parent graph are then illustrated by simple computer experiments.

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FRANK, Ove (Lund). 1979. "Estimating a Graph from Triad Counts." *Journal of Statistical Computation and Simulation* 9: 31-46.

An empirical graph  $\hat{G}$  is described by a random graph model which generates  $\hat{G}$  from an unknown graph  $G$  by independent removals and additions of edges. We consider the problem of estimating  $G$  by using the triad counts in  $\hat{G}$ , i.e., the numbers of different induced subgraphs of order three in  $\hat{G}$ . We describe methods of estimating a transitive graph and a forest, and we indicate a possible approach for a general graph  $G$ .

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FRIEDMAN, Yona. 1980. "About Critical Groupsize." Tokyo: United Nations University. Project on Goals, Processes and Indicators of Development. Working Paper. January.

Groupsize as a key variable. Groups, graphs and graph parameters. Valence and degradation. Factors affecting critical groupsize. Social consequences of exceeding critical groupsize. Critical groupsize and beyond.

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A triumvirate of ophthalmologically-impaired rodents were in rapid perambulation in pursuit of the agriculturist's uxorial adjunct.

Was transitivity achieved?

HAUSER, Robert (Wisconsin - Madison). 1980. "On 'Stratification' in a Dual Economy." *Institute for Research on Poverty, Discussion Paper, January.*

This paper reanalyzes NORC General Social Survey data used in a much-cited paper by Beck, Horan and Tolbert (1978) which purports to show that earnings processes are heterogeneous across "core" and "peripheral" industrial sectors. The reanalysis shows that Beck et al. reached this incorrect conclusion because they included improperly classified nonearners in a logarithmic earnings function. Other theoretical and methodological defects of their analysis are also discussed.

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ISAAC, Larry (Florida State), Elizabeth MUTRAN (Duke) and Sheldon STRYKER (Indiana). 1980. "Political Protest Orientations among Black and White Adults." *American Sociological Review* 45 (April): 191-213.

The political protest activities of the late 1960s and early 1970s stimulated a flurry of empirical research by social scientists seeking explanations. Most of the research, aimed at explaining individuals' radical political orientations, willingness to use protest and perhaps violence, or actual riot or protest participation, has been guided by either a mass society perspective or some variant of the relative deprivation model. After outlining the basic elements of these two theories as well as an alternative differential socialization theory, central causal features of each theory are integrated into a structural equation model designed to explain individual political protest orientation, and the model (allowing for measurement error in the endogenous constructs) is estimated on separate samples of white and black adults. The results indicate strong race-specific differences in the formation of political orientations. Explanations for these differences are examined; the empirical patterns are interpreted as supporting a theory of differential political socialization.

There has been very little empirical analysis directed at the primary group isolation hypothesis of mass society theory. The findings of this study support Pinard's (1971) conclusion that the impact of primary group isolation (integration) is likely to depend on the social context and political orientation of particular primary groups. That conclusion, in turn, reinforces our sense that the proper interpretation of our findings with regard to the primary group integration variables is not that of mass society theory. Rather than the interpretation suggested by the mass society perspective (that isolation breeds a reactive formation), it seems much more reasonable to view the observed effects on protest orientation in differential political socialization terms: Those whites who have roots in a geographical area in the form of ties to family, friends and neighborhood networks with a stake in political stability learn a conservative orientation toward protest; those blacks who have ties to other blacks who see the interests of blacks as requiring political changes through unconventional political means learn a more radical orientation.

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KADUSHIN, Charles (CUNY). 1979. "Notes on Expectations of Reward in N-Person Networks." *Unpublished Paper.*

This paper offers some first steps in a theory of expectation in networks, in which objects or symbols circulate among 3+ social units. Our theory attempts to specify some of the conditions under which a person in a potentially N-person exchange network will be likely to risk passing something on, and will "trust" that the network will afford some reward. In the light of common indeterminacies in these networks, we will discuss some factors which determine costs, rewards and the degree of trust in different types of networks. We will also note in passing how the theory developed is related to similar ideas about "faith," "commitment," and "trust."

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KANDEL, Denise (Columbia). 1980. "Drug and Drinking Behavior among Youth." *Annual Review of Sociology* 6: 235-285.

Drug research has made important contributions to fundamental issues in socialization, contributions that go beyond their specific application to drug behavior. Preliminary insights are provided into two issues relevant to processes of interpersonal influence: (a) the role of selection and socialization on similarity in friendships; and (b) the meaning of the perceived environment. The most consistent and reproducible finding in drug research is the strong relationships between an individual's drug behavior and concurrent drug use of friends, either as perceived by the adolescent or as reported by friends.

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KENNEDY, Leslie W. (Alberta). 1978. "Environmental Opportunity and Social Contact: A True or Spurious Relationship." *Pacific Sociological Review* 21 (April): 173-186.

Our analysis will focus on testing the conclusions drawn by Gans that the social consequences of differences in density and house type are overrated. If the occupant's characteristics are held constant,

he argued, the differences in actual social contact diminish (Gans, 1972: 191). For Gans, the prerequisite for social interaction was homogeneity and not physical propinquity which was stressed by researchers such as Festinger *et al.* (1950; Gans, 1961: 746-747).

Two conclusions can be drawn from our findings. First, contrary to Gans' argument, there is a range of environmental factors, not only propinquity, which are important in affecting social contact with neighbours, kin, and overall entertainment frequency regardless of the characteristics of the population. Second, friendships are developed according to the social characteristics of the subgroup involved regardless of the dwelling characteristics or location of the respondent, a finding which supports Gans' original argument.

We find that differences do emerge in social relations and entertainment frequency with variations in house type, location, number of rooms, number of people in the household, length of residence, and perceived adequacy of space in the dwelling. However, are these relationships spurious, as was suggested by Gans, and do they simply disappear when we control for the social characteristics of the population? Our data indicates social characteristics selectively affect the environment-social contact relationships, but the only one that consistently disappears is that relating to friendships.

Environmental factors do, in fact, play a role in affecting social relations despite the characteristics of the population under study. These findings should be encouraging to those working in the field of man-environment relations as they indicate the importance of studying these relationships more extensively. In terms of friendship, network studies should be more specifically grounded in the spatial context to examine the latter's effect on these network ties. Special emphasis should be placed on examining the spatial dimensions of friendship ties to determine whether these are under the influence of any constraining factors, at all.

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KILLWORTH, Peter D. (Cambridge) and H. Russell BERNARD (West Virginia). 1979. "A Pseudomodel of the Small World Problem." *Social Forces* 58 (December): 477-505.

A model is presented of the decision-making process used by intermediaries in small world experiments in the United States. This involves allocating each of the population of the U.S. to one of 16 categories; the membership of each population is a function of the target in the small world experiment. This is shown to be equivalent, for modeling purposes, to a Markov process with 16 states.

The Markov transition probabilities are derived partly from reverse small world data and partly by guesswork, but using as few disposable parameters as possible (3). Statistics of chain lengths from various types of starter (e.g., those far from the target, those in the target's occupation, etc.) are derived, and compare favorably with observations. The possibility of incompleting chains is included by allowing a constant probability of loss at every step in the chain. Again, there is good agreement with most observations.

How such a model might be validated by suitable observations is discussed; in particular, a set of experiments is described which should produce a great deal of additional information about the small world experiment.

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LANGEHEINE, Rolf (Kiel). 1979. "Measures of Social Proximity: Preliminary Results and a Follow-up from a Large Body of Networks." *Unpublished paper.*

Analysis of social networks may be performed by means of a variety of measures of social proximity that can be assigned to different theoretical concepts. The aim of this study is to examine the generalizability of previous findings as to the substantive structure of such measures. Results reported refer to a total of 31 sociometric data matrices that vary according to different criteria. Recommendations are given as to the suitability of different measures in research work.

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LANGEHEINE, Rolf (Kiel). 1980. "Erwartete Fitwerte für Zufallskonfigurationen in PINDIS." *Zeitschrift für Sozialpsychologie* 11: 38-49.

Following the tradition of the random-approach, this paper reports expected fit values for random configurations in the Lingoes-Borg PINDIS-model for individual differences scaling from 5 to 50 objects (stepsize 5) and 3 to 30 configurations (stepsize 3) in 2 and 3 dimensions. Possibilities to use these reference values in order to perform tests of significance are discussed.

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LEONTIEF, Wassily W. 1980. "The World Economy of the Year 2000." *Scientific American* 243 (July): 207-231.

The first input-output model of the world economy suggests how a system of international economic relations that features a partial disarmament could narrow the gap between rich and poor. A national input-output table describes the web of technologically determined interindustry relations that constitute the economic fabric of a country. Naturally many of the threads of the fabric cross geographic borders and are woven into the fabric of another country, but until recently such threads have always been left hanging loose. No attempt was made to tie the various national tables together, an omission that not only prevented the systematic application of the input-output method to investigating the structure of international economic relations but also introduced an element of uncertainty into the study of national economics. This problem is solved in the input-output model of the world economy in a simple way: the world is visualized as consisting of 15 distinct geographic regions, each one described by an individual input-output table, and these tables are then linked by a network of interregional commodity flows.

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LINEBERRY, Robert L. and Sharon M. WATSON. 1980. "Neighborhoods, Politics and Public Services: The Case of Chicago." *The Urban Interest* 2 (Spring): 11-18.

From a survey of 411 residents of five wards in Chicago, the authors examine the linkages between citizens and the city government with respect to service delivery. They conclude that Chicagoans enjoy an unusually close link between citizens and service bureaucracies due to the presence of a well-developed set of neighborhood political institutions and leaders which citizens use to communicate service preferences to city government. Neighborhood organizations appear to be especially important to low income and working class communities who have greater need of the services of "mediating structures" than middle and upper class residents.

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LONG, Norton E. 1980. "The City as a Local Political Economy." *Administration and Society* 12 (May): 5-35.

Long explores the causes of the contemporary urban crisis and seeks to identify ways in which public policy can help resolve the crisis by helping cities regain their social and economic functions. He sees a crucial role for neighborhoods and neighborhood-based political and economic institutions in this recovery of function.

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PILISUK, Marc (California - Davis). n.d. "Delivery of Social Support: The Social Imoculation." Unpublished paper.

A review of the literature on health breakdown and susceptibility to physical and mental illness points to a pervasive relationship between health status on the one hand, and the insufficiency or disruption of interpersonal ties on the other. Social marginality and loss are commonly associated with high incidence of breakdown in diverse forms. The mechanism by which social relationships may affect the immunological system, and the social mechanisms that promote continued social ties are examined. These social mechanisms are related to the emergence of intentional supportive networks and to the preventive role of mental health practitioners in health promotion through the facilitation of social support.

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PILISUK, Marc (California - Davis) and Meredith MINKLER (California - Berkeley). n.d. "Supportive Networks: Life Ties for the Elderly." Unpublished paper.

Recent studies suggest that the increased vulnerability of the older person to physical and/or mental breakdown is related to loss or deficiency in the pattern of supportive ties.

The major arrangements for supportive relationships for older persons have been through family ties. With increases in the geographical separation of adult children from their parents and with greater longevity, the needs of the elderly are increasingly being transferred to either public service settings or to voluntary associations. The resource needs depend in part on the individual's existing contacts, and his/her state of health as well as upon the psychological history of the person.

Various programs have addressed the differences in social support for older people in markedly different ways. Of the programs examined, one builds networks of ties among poor older persons living isolated lives in cheap hotel rooms. A second works with an ethnically-defined group of individuals whose chronic illnesses have limited their ability to maintain family and community ties. Still other forms have been directed to peer support for older persons to actualize potentials not always recognized for their age groups. Finally, some provide a network for effective social or political action with supportive social caring as a by-product.

By evaluating the offerings of these programs against the concepts of network theory we are able to show how the needs for social support among the elderly are highly differentiated and deserving of equally differentiated forms of response.

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PILISUK, Marc and Susan Hillier PARKS (California - Davis). n.d. "Structural Dimensions of Social Support Groups." Unpublished paper.

Voluntary or intentional groups are providing much of the mutual support once associated with extended kinship groups. They are meeting critical needs for the health, security and well-being of their members and are organized in diverse ways for diverse purposes. The groups are important to study both as an emerging social phenomenon and for their potential values in providing protection against illness and isolation. The first tasks in such study are to describe and to classify the array of social support groups. A study of twenty-eight of these supportive groups suggests a set of dimensions that underlie the differences among them and the structural factors that enhance or limit their effectiveness in providing enduring social support.

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PILISUK, Marc and Susan Hillier PARKS (California - Davis), n.d. "Networks of Social Support: A Review." Unpublished paper.

There has been a decline in the traditional sources of enduring supportive contact. In consequence, certain subpopulations have experienced isolation and the detrimental consequences to physical and mental health that follow. Other forms of supportive ties have arisen to fill the gap in the form of mutual help groups, neighborhood helpers, and intentional extended families. The human service system has adapted to an increasing reliance upon informal patterns of helping by recognizing the informal systems and seeking to assist them. Network analysis which described repeated patterns in the transactions among individuals holds substantial promise for the study of the various networks of social support that have emerged.

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RATCLIFF, Richard E. (Syracuse). 1980. "Banks and Corporate Lending: An Analysis of the Impact of the Internal Structure of the Capitalist Class on the Lending Behavior of Banks." *American Sociological Review* 45 (August): 553-570.

This paper analyzes the lending patterns of commercial banks in a major metropolitan area. The banks are studied in terms of their ties, through the members of their boards of directors, to networks of economic power and upper class social interaction within the metropolitan structure of the capitalist class. The central research question concerns whether the extent of a bank's centrality to these networks substantially influences the decisions made by each bank regarding the allocation of the capital it commands. While attempting to consider the broader social consequences of private economic power, the paper addresses three problems found in many recent studies of interlocking directorates: the general lack of attention paid to questions of social consequences as opposed to issues of structure; conceptual confusions central to explanations that focus on notions of "cooptation"; and the omission of measures on the dimension of economic power. The empirical analysis, dealing with the impact of class structure, economic power and institutional size measures upon the distribution of bank loan capital, reveals that the main determinants of lending are the class structure characteristics of banks as these are reflected in the network linkages of their boards of directors. In particular, banks whose directors are tied to numerous local corporations which represent major concentrations of economic power and, to a lesser extent, to the most exclusive upper class social circles are those most likely to emphasize concentrated lending to capitalist borrowers and correspondingly, most likely to withhold capital from mortgage loans. It is also shown that these differences in lending behavior are not related to the profitability of the banks themselves. It is argued that these patterns are best explained by a model of capitalist class co-ordination in which dominant groups exercise their abilities to influence banks and corporations in ways that benefit their interests. These findings are examined in terms of the general economic stagnation and even decline of older urban areas.

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SINGER, J. David (Michigan). 1980. "Accounting for International War." *Annual Review of Sociology* 6: 349-367.

Much of the research on the systemic conditions associated with war has been undertaken as part of the Michigan Correlates of War project. Most of the reliable evidence to date concerns systemic structural dimensions. Two structural attributes of the system may be significant to the study of international war: (a) the configurations generated by alliance bonds, and (b) those generated by distributions of power.

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SNOW, David A., Louis A. ZURCHER, Jr. and Sheldon EKLAND-OLSON (Texas - Austin). 1980. "Social Networks and Social Movements: A Microstructural Approach to Differential Recruitment," American Sociological Review 45 (October): 787-801.

Past examinations of differential recruitment to and the differential growth of social movements have typically sought explanation at a social psychological/motivational level of analysis. That focus has recently been called into question by scholars concerned with the process through which movement organizations expand their ranks and mobilize support for their causes. Yet, as Useem (1975) and Zald and McCarthy (1979) have noted, there has been little systematic research conducted on the details of the influence process. Drawing on data derived from a synthesis of existing research and two primary sources, this paper attempts to shed greater empirical and theoretical light on the movement recruitment process. The findings indicate that differential recruitment is not merely a function of dispositional susceptibility, but is strongly influenced by structural proximity, availability, and affective interaction with movement members. The findings also indicate that a movement organization's network attributes function as an important determinant of its recruitment strategies and growth.

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STOKMAN, Frans N. (Groningen). 1980. "Graph Theoretical Elaboration of Cumulative Scaling Techniques." Quality and Quantity 14: 277-288.

In this paper a graph theoretical elaboration of the stochastic cumulative scaling model of Mokken (1970) is given to determine: (a) cumulative scales of vertices on the basis of their relations with other vertices in a simple graph; and (b) cumulative scales of relations in a multigraph.

In Section 1 we introduce a number of graph theoretical concepts that are used in the remainder of the paper. In Section 2 cumulative scales of vertices in a simple graph are treated, and in Section 3, cumulative scales of relations in a multigraph. After determination of the different cumulative dimensions of relations in a multigraph, for each dimension a new graph can be generated and analyzed. In Section 14 it is shown how this can be done.

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SØRENSEN, Aage (Wisconsin-Madison). 1980. "Experimental Matching of People to Jobs." *Institute for Research on Poverty Discussion Paper #594*.

The paper proposes a research program to investigate the effect of job characteristics, in particular career ladders, on the work orientation and employment behavior of people. Systematic planned variation of jobs with random allocation of people to jobs is proposed as part of the federal Employment Opportunity Pilot Project (EOPP).

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USEEM, Michael (Boston). 1980. "Corporations and the Corporate Elite." Annual Review of Sociology 6: 41-77.

This review places special emphasis on research incorporating both organizational and class variables. No attempt is made to survey the vast literature on business, nor is this review intended to survey writing on the upper class. We first consider whether the corporate elite's relationship to the corporation is such that the corporate elite can be characterized as a "capitalist class." Second, we examine how corporate organization generates both cohesion and division within the corporate elite. Third, we review the process of intergenerational reproduction of the corporate elite, with special reference to the role of family background in determining who rises to leadership positions in corporations. Finally, we explore the reactive impact of corporate-elite organization on corporate organization and behavior. We focus on US studies.

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ZASLAVSKY, Victor (Memorial) and Robert J. BRYM (Toronto). 1980. "The Structure of Power and the Functions of Elections in the U.S.S.R." Paper presented at the Second World Congress on Soviet and East European Studies, Garmisch, West Germany, September 30 - October 4.

This paper raises the question of why, despite relatively widespread dissatisfaction with single-candidate elections in the USSR, and despite the authorities' knowledge of this dissatisfaction, the form of electoral 'contests' has not been altered; on the contrary, it is demonstrated that the single-candidate system has in fact been strengthened of late. It is suggested that the chief reason for the persistence and shoring up of the single-candidate principle lies in the fact that it reinforces the existing distribution of power in the USSR. Specifically, single-candidate elections buttress the control exercised by ruling cadres over their own social reproduction (i.e. the process by which they recruit new members) and over the cognitive maps of the citizenry (i.e. internalised political culture).

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Selected Abstracts from the Annual Meetings of the American Sociological Association, New York City, August 27-31, 1980.

ALBA, Richard D. (Cornell) and David E. LAVIN (CUNY). *"Community Colleges and Stratification Within Higher Education."*

The concept of tracking has provided an important tool for understanding stratification within educational systems and has been applied to higher educational systems by distinguishing between two-year and four-year colleges. In this paper, we make use of a natural experiment from the open admissions program at the City University of New York to determine whether two-year colleges function as a separate track. Comparing students who applied and were accepted to four-year colleges with others who applied but were placed in two-year colleges, we find that community colleges deter students from attaining their educational ambitions. Following the year-by-year academic progress of students in the two different contexts, it does not appear that there are special academic hurdles in the community colleges. Rather, students placed in them appear to become discouraged over time.

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BENIGER, James R. (Princeton). *"When the President Runs: The Role of the Presidency in Presidential Elections, 1936-1980."*

The presidential election campaign is usually modeled as a contest between two major candidates or parties. This traditional model lacks a crucial element: the role of the American Presidency itself (in 10 of the past 13 campaigns, one of the candidates has been President). When viewed from the White House, the campaign becomes a struggle of purposive actions overshadowed by one actor, the President of the United States, who possesses unrivaled control over decisive events; hence the Presidency must play a central role in presidential campaign models. This paper outlines such a model with attention to four aspects of presidential strategy: deciding whether to run, assessing the primary elections, using events to gain support, and translating this support into victory at the polls. The major empirical findings in each area are: (1) Deciding whether to run. Minimum requirements are roughly a simple majority of public approval, an approval-disapproval ratio of at least 3 to 2, relatively stable public support into the election year, and at least a slight lead over the most likely nominee of the opposing party in trial heat polls. (2) Assessing the primaries. No President has been retained who won fewer than seven primaries; losing three or more primaries has always meant that the President would be turned out of office. There is some evidence that weak challenges of a President are associated with better showings in November than for no challenges. (3) Using events. Although the President routinely rallies support during a foreign crisis, even if it is mishandled, he serves as a ready scapegoat for domestic problems. The economy in particular has often hurt but rarely helped the President's popularity. The most easily controlled and useful events for gaining public approval are all on the international front: major foreign policy addresses, foreign travel, treaty signings, summit meetings, receptions of foreign leaders, space missions. Decisive actions involving other nations are even more likely to increase popular support, but are fraught with the danger of American casualties, one factor which links foreign affairs with decreases in Presidential support. (4) Translating approval into votes. Approval of a President's performance in office does not necessarily translate into votes in November. Running as the President will usually be the optimal strategy, but this is the case only if approval of the President exceeds his support in trial heat polls with the opposition ticket.

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BENIGER, James R. and Cathy LEECO (Princeton). *"Experts and Specialization: Vertical vs Horizontal Differentiation of Science."*

Despite the increasing prominence of experts in post-industrial society, their role has largely been ignored by social scientists. This paper outlines several approaches to the subject, including the historical development of the concept of "expert" in relation to structural differentiation, specialization of knowledge, and integration in society. Specialists are viewed as results of horizontal differentiation, experts of vertical differentiation. Historical evidence is presented that the words "specialist" and "expert" (and derivatives) first appeared at the time (1825-65) of the earliest division of intellectual labor, and that the former diffused more quickly through professions and areas of knowledge. The number of experts is shown to be proportionate to the number of specialists, while the ratio of experts to specialist may be increasing, with implications that: (1) the importance of individual experts is decreasing; (2) the aggregate importance of experts as a group is increasing; (3) checks on the competence of experts are diminishing; (4) as scientific knowledge differentiates, its "generalist" component, ranging from popularizers to synthesizers, increases; and (5) reallocations in favor of new areas is increasingly restricted, while incentives for individuals to participate in these areas decrease.

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BONACICH, Phillip and Oscar GRUSKY (California - Los Angeles). "Coalitions and Power in the Family: Some Preliminary Findings."

This paper presents selected preliminary findings from a research program concerned with family group processes. The focal issue of the research program lies in the contribution of children to the family power structure as expressed through their participation in coalitions and the effects of power position on children's self-esteem. The major theoretical stimulation of the work derives from minimum resource theory.

CARROLL, William K. (York). "The Canadian Corporate Elite: Merchants and Bankers or Finance Capitalists?"

Recent study of the economic elite in Canada has argued that its character may best be described as "commercial," restricted in activity to the sphere of circulation, and thus dependent on foreign-controlled industrial capital. According to this interpretation, the development of capitalism in Canada, particularly since World War II, follows a pattern of "silent surrender" to multinational capital, raising serious questions regarding further economic development and future political sovereignty. Against this view, the paper presents some findings from a study of the elite in the post-World War II era, attempting to demonstrate that a consolidation of indigenously-controlled finance capital has occurred simultaneously with penetration and accumulation of foreign-controlled capital. The implications of these conjunctural trends are briefly explored.

CLAWSON, Dan (Massachusetts - Amherst). "Inside Contracting: The Organization of Production in 19th Century Industries."

Inside contractors were similar to independent small manufacturers in that they contracted with a company to produce an item, were paid an agreed sum for each completed item, and had complete control over production (hiring their own workers, setting wage rates, determining the methods of production, etc.). At the same time, however, inside contractors were employees of the company subject to company discipline, frequently receiving a day wage in addition to the contract price, working inside the company's buildings, using its machinery, equipment, and raw materials.

In the last half of the nineteenth century, inside contracting was one of the most important and widespread ways of organizing production, especially in large factories using technologically advanced methods. The system was organizationally efficient, produced technological improvements, led to rapid increase in productivity, was compatible with mass production, and was used for all kinds of work, both skilled and unskilled. Class relations between contractors and their employees were by no means equitable. The existence and success of this system calls into question much of the conventional wisdom on organizations and occupations.

DASILVA, Fabio (Notre Dame) and Jim FAUGHT (Loyola - Marymount). "Life and Culture: Simmel and Phenomenology."

The event of the English translation of Simmel's *The Philosophy of Money* makes possible a more detailed consideration of his work and in particular an analysis of his methodology.

His commentators have quite often raised a variety of questions to his position. Considerations of his ambiguity, extensive use of analogical thinking, his wholism, aestheticism, are well known.

The problem with such evaluations seems to emerge from the fundamental perspectives taken by the commentators: at the one hand a reification of the concept of method which is at the limit cast in the model of the classical sciences, an empiricist position, and a concern with positive research techniques; at the other hand an unwillingness to confront Simmel's work in its own and let analyses of methodology to become rooted in the work rather than dislodging it into external positions.

In this presentation we intend to circumvent these derivative problems by presenting the results of an immanent analysis of method in *The Philosophy of Money* and by showing parallels between such practice and methodological instances with the work of E. Husserl and others. We intend to show that although it is possible to argue that Simmel's work operates with a methodology which is not framed within the usual domain of empiricist sociology, it is certainly understandable and classifiable as at least the result of the use of a philosophical methodology which has significant parallels in continental scholarship.

DEAN, Alfred and Mark TAUSIG (Albany Medical College of Union University). "Relating Types of Social Support to Depression in the Life Course."

The results reported in this paper are part of a larger study of the relationship between demographics, stress, social support, and depression. Earlier findings from this study have revealed differences in the types and magnitudes of variables predicting depression based upon stage in the life course. This paper attempts to refine these observed differences by elaborating types of social support and examining their role in predicting depression at different stages in the life course.

The results indicate that while lack of companionship support is the most powerful predictor of depression for all age groups, the role of demographics, stress, and other forms of social support as predictors of depression change throughout the life course.

In the age group 17-24, lack of companionship support, lack of demand and responsibility support, sex (female), and stressful life events predict depression. In the age group 25-49, companionship support, demand support, and illness explain depression. In the 50-64 year old group, marital status, companionship support, interpersonal conflicts, and illness predict depression. In the age group 65+, demand support, marital status, income, and illness best predict depression.

We conclude by considering some implications for future research suggested by the outcomes observed.

DiMAGGIO, Paul (Yale). "Cultural Capital and School Success: The Impact of Status-Culture Participation on the Grades of U.S. High School Students."

According to Weber, status groups act, consciously or unconsciously, to reward members, exclude non-members, and monopolize scarce goods and privileges. Such group processes, however, have been neglected as status-attainment research has concentrated on demographic and social-psychological independent variables. This paper reports the findings of an effort to assess the impact of one component of status-culture participation--"cultural capital"--on one aspect of life chances -- high school students. Measures of status-culture participation were found to have significant positive effects on grades, independent of family background or test-taking ability. The pattern of relationships, however, differed strikingly by gender.

DREIER, Peter (Tufts). "The Tenants' Revolt as an Urban Social Movement."

Until recently, social movements among tenants were confined primarily to the poor and engaged primarily in various forms of disruptive protest to attain rather limited ends. Recently, beginning in the 1970s, however, the social base, organization forms, and political goals of tenant movements around the United States have broadened. Almost every urban area has some level of tenants organization concerned with a wide range of issues, such as maintenance and repairs, landlord-tenant laws, displacement from condominium conversions, rent increases, rent control, and tenant control.

This paper analyzes the structural determinants of these activities in light of changes in the urban political economy and housing. It examines the tenants' revolt as a movement around the relations of consumption (rather than production), draws some parallels and contrasts between these spheres, and analyzes some of the pitfalls and potentials of consumption-oriented movements, particularly around housing.

The work of Castells, Piven and Cloward, and Lipsky is examined in terms of the debate between organization-building and popular mobilization in urban social movements.

ECKSTEIN, Susan (Boston). "Distributive Consequences of Latin American Revolutions."

Social scientists analyze conditions that give rise to revolution but they rarely analyze the actual impact that the transformations have. How do postrevolutionary societies differ from societies with no revolutionary history, and how do outcomes of revolutions associated with different class alliances and revolutions instituting different political economies compare? This article compares the differential impact of revolutions "from above" and "below," revolutions instituting capitalism and socialism as the dominant mode of production, and revolutions occurring in societies that are integrated differently into the world economy. The revolutions which are contrasted are twentieth century class transformations in Latin America. The analysis focuses specifically on the ways that major societal upheavals improved the social and economic welfare of people in Mexico, Bolivia, Cuba and Peru.

FINE, Gary Alan (Minnesota) and Sherryl KLEINMAN (North Carolina - Chapel Hill). "Networks as Symbolic Interaction: Understanding Structure Through Behavior."

Although symbolic interactionists conceive of social structure as interaction, they have not developed concepts which take structure into account. We propose that interactionists use "social network" as a metaphor which links individual behavior to the larger social system. We provide a formulation of network, consistent with symbolic interactionist assumptions, arguing that it: (1) approximates the original, anthropological formulation better than the current "structural" conception does, (2) offers symbolic interactionists a unit of social organization better suited to their perspective than their usual unit of social organization, the interacting group, and (3) allows symbolic interactionists to deal with "macro" sociological concerns. Network is conceived of as a set of relationships which people imbue with meaning and use for personal or collective purposes. By emphasizing subjective meaning, and suggesting that researchers investigate multi-purpose and weak ties, the interactionist formulation provides theoretical insights into the social construction of society which "structural" approaches overlook. Support for this formulation is drawn from a participant observation study of little league baseball teams.

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FISCHER, Claude S. (California - Berkeley). "The Public and Private Worlds of Urban Life."

The theory that urbanism produces interpersonal estrangement gains support from evidence that urbanism is associated with less public helpfulness and more social conflict, but is challenged by evidence that urbanism is not associated with fewer social ties or with psychological stress. An alternative theory contends that urbanism produces fear and distrust of "foreign" groups in the public sphere, but does not affect private social worlds. A new survey study supports the latter explanation by confirming the earlier findings and then showing that urbanism is not correlated with distrust of neighbors but is correlated with distrust of "other people" in the wider community.

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FISCHER, Claude S. and Stacey OLIKER (California - Berkeley). "Friendship, Gender, and the Lifecycle."

Survey data on the personal networks of a cross-section of adults show that among young marrieds and young parents, men had more friends than women did, but empty-nest and elderly men had fewer friends than women at that stage did. Structural factors appear to explain the first difference, and dispositional factors may explain the latter difference.

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FREIBERG, J. W. C. (Centre d'étude des mouvements sociaux, Paris). "Towards a Structuralist Model of State Intervention in the Mass Media."

The paper argues that an *instrumentalist* notion of the relationship between: (a) the ruling class, (b) the class state, and (c) civil society must be replaced with a *structuralist* notion of the relationship between (a) the dominant power bloc, (b) the complex of state apparatuses and state powers, and (c) the ongoing class struggle. The mass media are better seen not as "tools of the ruling class" but as sites of class conflict occurring within a larger economic and political context. The state should be conceived not as a unified tool, but as a site of both inter-class and intra-class conflict, and as an organizing force for the structurally divided dominant power bloc, and a disorganizing force vis-à-vis the dominated classes. This view allows us to perform more subtle analyses of the multiple interventions of contemporary states in the media. The case of France is examined in detail.

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GAMBRELL, Richard R. (California - Davis). "Historical Conjunctures and Unlinked Processes in the Case of Protest and Rebellion in Brazil, 1956-1971: The Bane of Theory."

Widespread protest and a military "revolution" occurred in Brazil in the 1960s. This complex of events is used to assess four approaches to a theory of protest and revolution. The four are: (a) social psychological; (b) agrarian revolt; (c) structural; and (d) political-mobilizational. An attempt is made to use each approach to explain the complex of events in Brazil. The attempt reveals shortcomings of each approach. The underlying reasons for the shortcomings and ways to overcome them are discussed.

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GASSER, Les and Walt SCACCHI (California - Irvine). "Toward a Social Framework for Understanding Personal Computing."

Since the emergence of technologies to support personal computing in the mid-seventies, there has been much speculation about the potentials and impacts of widespread personal computing use. In this paper we analyze two perspectives for understanding the dissemination, uses, and impacts of personal computing. The two perspectives differ in their units of analysis and their explanatory power.

On the basis of empirical data we and others have gathered, we illustrate that if the unit of analysis is interaction between one person and one machine, a variety of conditions integral to the continued use of personal computing will be overlooked or simply assumed. Instead, we define the notion of a "computing package"--a set of technical and social resources important for ongoing involvement with personal computing. We show how employing the computing package as a unit of analysis provides a clearer understanding of the social dynamics of personal computing. Social analyses which take a package-centered perspective can help assure a better fit between personal computing and the actual settings where it will be used.

GITLIN, Todd (California - Berkeley). "The Concept of Information."

Media institutions, along with many academic researchers and other commentators, embrace the Enlightenment assumption that the modern institutions of mass communications are and ought to be in the business of diffusing information. They take for granted that information is a content and goal separable from, and superior to, ideology. At the same time, social groups mobilize to shape public information by their own lights. But the adequacy of the goal of information needs critical scrutiny. In modern societies, the mass media relay pulverized fragments of knowledge, information bits which can be conveniently processed through news organizations, then stored and processed through data-processing systems, but which cannot be comprehended as wholes. The reduction of social knowledge to fragments is part of a larger secular trend in modern societies, corresponding to the disorder of market-dominated political economies, the rise of empirical science, and the eclipse of substantive reason. In other words, the mass diffusion of information bits throughout a depoliticized mass society is analogous to the breaking down of knowledge to manipulable bits within modern bureaucracies. Audiences which receive information are not necessarily made more knowledgeable thereby. Indeed, there are conditions in which the simple diffusion of information bits actually may help undermine the capacity of publics to comprehend social reality and transform it deliberately. The multiplication of information may make for confusion and enforced passivity; it also may serve to legitimate the power centers of liberal capitalist society, and to convince various publics that they are equipped to participate in the existing decision-making process. Publics must also exert considerable energy to warding off the superflux of information with which they are bombarded. Proposals for decentralized or counter-hegemonic alternative media need to come to grips with the ways in which fragmented information, whatever its ideological frame, is not neutral, but amounts to an ideological support of the existing institutional order, coexisting with and supplementing the technocratic domination of public policy. I close by examining alternatives to the ideal of multiplying the volume of information, and exploring their implications for the prospects of democracy.

GOLDSTONE, Jack A. (Harvard). "Population and Revolution."

From 1550-1850 revolutions occurred in Europe in two great waves: the period of "Early Modern Revolutions" from 1550 - 1650 (the Netherlands Revolt, the Bohemian Revolt, the Fronde, the Catalan Revolt, and the English Civil War), and the great "Age of Revolution" from 1789 - 1850 (the French Revolution and the revolutions of 1830 and 1848). The intervening years from 1660-1770 were years of comparative stability. This two-wave pattern is shown to be closely tied to the pattern of population growth in Europe during the same period. Three mechanisms by which population growth affects stability are described: the growth of cities; price inflation; and changes in the age structure. An analysis of the decade-by-decade frequency of European revolutions during this period demonstrates that prior population growth is a more accurate predictor of revolutions than is the incidence of wars or famines, or the growth of capitalism.

GORIN, Zeev (Bradley). "Modernization, Dependency, or Marxism?"

This study consists in a partial juxtaposition of three major theories of macro-social change. The three are modernization theory, dependency/world economy theory, and the Marxist theory of development. The juxtaposition is conducted by testing the ability of the three theories to explain levels of equality and welfare.

Each of the three theories postulates a different central concept to explain societal dynamics. This concept in the theory of modernization is level of socio-economic development; in dependency/world economy theory it is dependency, or position of society in the world-system; in the Marxist theory of development it is the mode of production. Each of the three theories postulates the existence of a relationship between its core variable and a set of common dependent variables. The latter are income inequality, position of women in society, level of health, education, nutrition, and social security.

The empirical analyses are conducted by regressing each one of the dependent variables on the three core variables. The design is a cross-sectional one, utilizing large samples of countries (sample size varies according to variables, however in most cases the samples are close to or above 100). The results of this analysis support the conclusion that level of socio-economic development has a direct positive effect on the position of women in society, on the level of health, education, nutrition, and social security; that level of socio-economic development has a negative effect on income inequality--in the capitalist countries it "redistributes" income from the richer and poorer income groups to those in the middle and in the socialist societies it "redistributes" from the upper to the lower income groups. Concerning dependency, it is found that it has a positive effect on income inequality within the capitalist sample of countries, while it has no such effect within the socialist block of countries. Regarding the mode of production, it is found that it has a positive effect on income equality and the other dependent variables.

The next question asked is which of the three theories can incorporate, in a coherent manner, our findings regarding the effects of all three independent variables. The examination of this question leads to the conclusion that among the three theories it is the Marxist theory of development that more adequately accounts for the relationships established in this study.

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GRANOVETTER, Mark (SUNY - Stony Brook) and Roland SOONG (Monar Marketing Systems, Inc.). "Threshold Models of Collective Behavior: Extensions and Applications."

"Threshold models of collective behavior," (previously described in a May, 1978 American Journal of Sociology article), apply to situations where actors have two alternatives, and choose between them in part based on how many others have previously chosen one or the other. The models aim to predict the equilibrium (i.e., final) outcomes--how many make which choice--based on frequency distributions of "thresholds." (An individual with "threshold" 25% for joining a riot, for example, would join when 25% of others had done so, but not before.) It is shown that groups with similar average preferences (as indexed by "thresholds") may generate very different outcomes; hence, it is hazardous to infer individual dispositions from collective results. Slight changes in distributions may yield large changes in outcomes; it is shown, further, that such large changes may under certain circumstances be irreversible. This results from the existence of multiple stable equilibria for the same configuration of thresholds. Hence, the history as well as the state of the system plays a role in determining results. The basic model is extended to the situation where an "upper" threshold is introduced--a point beyond which individuals who had previously adopted an innovation, for example, abandon it when it becomes "too popular," as in the case of clothing styles. It is shown that such models can yield complex oscillatory behavior which need not settle down to equilibrium. Analogies to physical models in ferromagnetism, phase transitions, mean field and "renormalization" theories are explored. Application to empirical data is discussed.

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GROSSER, Rene C. (Colorado Division of Mental Health). "Social Support and Psychiatric Care Utilization."

A consistent finding of psychiatric epidemiological studies is that there are far more persons living in the community who, by virtue of their experience of high levels of psychological distress, appear to be in need of mental health care than there are individuals utilizing such care. This observation allows for the possibility that factors other than psychological distress or symptoms may motivate psychiatric help seeking. The influence of one such factor, namely social support, is examined in this study.

Data on adults admitted to a mental health center for initial outpatient treatment (N=99) are compared to data collected from a probability sample of adults who have not utilized psychiatric care and who reside in the center's catchment area (N=218). The analysis shows that utilizers have substantially lower levels of social support than do nonutilizers, as measured by intensity of relationships with relatives, friends, and neighbors, participation in community organizations, and by scores on a social support scale. Furthermore, these findings retain statistical significance when differences in the level of psychological distress, as measured by the SCL-90, is controlled for between the two groups.

Therefore, the experience of social support appears to reduce the motivation of persons to seek professional mental health treatment independent of whatever effect such social support may have on preventing or reducing symptoms. The implications this finding has for social policy, clinical practice, and mental health need assessment methods are examined.

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HAGOEL, Lea (Minnesota). *"Friendship Values and Intimacy Patterns in an Urban Community."*

Most of the early works in the area of community were holistic case-studies, where neighborhoods and parts of settlements were treated as communities. Later developments and research findings showed that community relations did not overlap geographical boundaries. Community was then viewed as a multi-dimensional ordinal variable. The primary relations dimension was emphasized in many network studies. But network analysis per se is blind to the evaluational and meaningful aspects of such ties. This paper reports a study of freindship networks in a first-ring suburb exhibiting mixed land use. Relational data were compared to friendship values (the latter were measured through the use of an instrument designed and developed for this purpose). Friendship patterns were found to be highly cosmopolitan for the entire sample. Friendship values clearly distinguished between sub-groups by gender and age. Implications for community organization are examined.

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HAWLEY, Jim (California - Davis). *"Foreign Economic Policy, State Theory and the Problem of 'Interests': The Significance of the U.S. Capital Control Programs, 1961-1974."*

This paper critiques to important schools of state theory: the bureaucratic politics model and many of the neo-Marxist models. It argues that both models while quite different in analysis and intent share assumptions regarding the nature of class and/or "interest group" formation within state structures. It suggests that neither paradigm adequately confronts the problem of interests, either bureaucracies in the bureaucratic politics model, or of class, class fractions and/or capitalism as a system in the case of most neo-Marxist models.

On the basis of this theoretical critique the paper offers an alternative formulation that, while in the neo-Marxist tradition, directly confronts the problem of interests. It does so by drawing on the work of Gramsci, Habermas, Schmitter and others to examine the relation between interests, ideology, consciousness and state structures.

The second part of the paper summarizes the experience of the U.S. government's capital control programs (1961-1974). Through this case study it is suggested that neither the bureaucratic politics model nor neo-Marxist state theories are able or have yet specified the form and content of the state's "relative autonomy" from dominant sectors of capital. Both traditions have not integrated or confronted the problem of "interest" representation and/or intermediation. An explanation for the capital control case is presented which involves as a central theme the problem of interests.

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HERMALIN, Jared (Hahnemann Medical College). *"The Effects of Social Support on the Readmission of Schizophrenic Patients."*

Given the high hospital readmission rate for schizophrenic patients, a challenge for social scientists and health planners is to determine how influential social supports can be in reducing this rate of return to public and private institutions. With this objective in mind, a follow-up study was conducted using a sample of 101 schizophrenic patients discharged from the inpatient units of a psychiatric teaching hospital for purposes of (a) examining the importance of 13 social support variables in predicting hospital readmission and (b) determining at what points in the post-discharge experience such variables had their greatest impact on hospital readmission.

Findings revealed that only five support variables were significantly related to hospital readmission: public esteem, succorance, stigma, length of residence and patient rejection. Rejection had its greatest impact within the first four months after discharge. The other significant variables had a cummulatively increasing effect over time.

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HIGLEY, John (Australian National University) and Gwen MOORE (Cornell). *"Elite Integration in the United States and Australia."*

Distinguishing four types of integrated and fragmented elites, we argue that the "consensual integrated" elite type is a precondition of stable democratic government. We hypothesize that the interaction networks of consensual integrated elites have largely similar structures in all stable democracies, and that these networks are more inclusive and less class-based, involving more extensive and centralized connections between all major elite groups than the ruling class, power elite or pluralist models of elite structure lead one to expect. We find that these hypotheses are consistent with American and Australian elite interaction networks as revealed by issue-based sociometric data taken from closely comparable elite samples and studies in the two countries.

HOOD, Jane C. (Wisconsin - Milwaukee). "Who is the Provider Now?: Role Bargaining in Dual Worker Couples."

Using a grounded theory approach, the author develops a theoretical framework for the analysis of role bargaining in dual worker couples. The data are tape recorded interviews with 16 working- and middle-class couples. All of the wives had re-entered the labor force full-time when their youngest child was school-aged or younger. Data gathered include accounts of: (1) the division of labor and marital relationship before the wife's return to work, (2) the changes that followed, (3) how new arrangements were negotiated, and (4) the couples' description of their situation at the time of the last interview. Using categories developed from a detailed analysis of these data, the author constructs a theory which explains why some couples begin to share more parenting and/or housekeeper roles after the wife returns to work while others do not. Before the wives returned to work the 16 families differed with regard to: (1) the relative strength of the husband-family, husband-wife, and parent-child bonds, (2) the reasons for the wives' return to work, (3) the husbands' orientations to their work, and (4) life cycle status. These pre-existing differences both defined the terms of the original bargain husband and wives made when the wives first returned to work and shaped the subsequent bargaining process.

It is argued that husbands will assume additional responsibility for housework and parenting in exchange for their wives' market work only if they also relinquish to their wives part of the responsibility to provide. Thus, wives who are defined as co-providers are more likely to share roles with their husbands than are those who are considered secondary providers. The author concludes that job-oriented husbands with young children and wives making 33% of the family income or more will be most likely to share roles, while career-oriented men with older children and wives making 25% or less of the family income will be least likely to do so. The former are most likely to be working and lower-middle class couples while the latter will more often be upper-middle class.

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HORWITZ, Allan V. (Rutgers). "Social Morphology and the Response to Mental Illness."

This paper explores the relationship between social morphology, the structural distribution of people in relation to one another, and the response to mental illness. Tight-knit networks tend to react inclusively to the mentally ill, maintaining them within the informal network without recourse to formal sources of social control. In contrast, loose-knit networks are more likely to utilize formal sources of social control and support. The degree of social integration predicts the reaction to the mentally ill within families, interpersonal networks, communities, and societies. A variety of sociological, anthropological, and historical evidence is presented in support of the general proposition.

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JAWORSKI, Gary Dean (New School for Social Research). "Simmel and the Année."

The co-awareness of and various levels of interaction and influence between Emile Durkheim and Georg Simmel are examined. Durkheim's reviews, appraisals, and translations of Simmel's writings are examined as expressions of an effort to simultaneously deny Simmel a place in the science of sociology and develop some of his insights for the furtherance of the Année Sociologique mission. An investigation of Durkheim's writings demonstrates that this concern with Simmel's sociology parallels his development of the notion "social morphology". Durkheim's 1900 article on Simmel, "Sociology and Its Scientific Field", is said to effect a significant conceptual advance from previous statements of the "social morphology" notion by a reformulation and empiricization of Simmel's form-content distinction. The ambiguities and ambivalent heritage of the notions "form" and "morphology" are then briefly traced in the works of two French Durkheimians--Lucien Levyre and Maurice Halbwachs--and in some American developments in demography. Suggestions for a larger research project are proposed.

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JONES, Brian J. (Villanova) and Albert G. CRAWFORD (Center for Research on the Acts of Man). "Work and Network: The Relationship of the Social Circle to the Economic Action of Poor Men."

Why do the poor remain poor? At least since the "Great Society" of the 1960s, social scientists have been addressing this issue with a notable lack of success. Explanations of individual impoverishment have polarized into two conceptual camps. The economists' paradigm has been labelled "situationism" and its focus is a kind of utility-calculus within the poor individual: why work if it will avail one nothing? The alternative framework concerns the "culture of poverty," a unique constellation of attitudes and values internalized by poor persons; or, why work if one has been culturally programmed to dislike it? Both conceptual schemes share these flaws: (a) they ignore the effects of personal relationships, and, consequently, (b) they have proven to be empirical failures.

What seems to be required is a conceptual scheme that will treat the poor as neither rational atoms nor cultural automations. Enter the concept of the social network, and its application in the present paper. The relevant social situation--poverty--is considered along two basic dimensions. "Respondent's Income Status" is self-explanatory; "Intragenerational Occupational Mobility" indicates subjects' direction of status-movement (downward, stationary or upward) over the study year. The "study year" is bounded by the first wave of questionnaires (1973) providing information about respondents' social circles, and the second wave of interviews in 1974 spotlighting respondents' economic behavior in the interval. Our sampled population is Camden males ages 18-45 with personal incomes under \$10,000 and household incomes under \$15,000 a year. The parent study was funded by the U.S. Dept. of Labor and yielded a total of 503 egos (respondents). Network members are operationally defined as relatives/friends ego "feels close to or could depend on for help" (N=1515).

The longitudinal survey design--with network and economic data in two waves--facilitates causal modeling. All of which allows us to mount a simple question: DOES THE SOCIAL NETWORK AFFECT THE OCCUPATIONAL BEHAVIOR OF THE POOR? The empirical answer is clearly yes.

*KEMPER, Theodore D. and Roslyn Wallach BOLOGH (St. John's). "What Do You Get when You Fall in Love? Some Health Status Effects."*

Students of the effects of life change events on health have asked for studies in which single, desirable, life events that are appropriate to the life stage of the population sampled are examined in relation to health status. We do this with a single event--romantic involvement--that moves through a number of phases. We found in our college student sample that adverse health reaction are more likely to occur among those who have never been in love or who have been in love more than three times; among those involved in a relationship of two to six months duration as opposed to a shorter or longer period; among those who have just broken up a relationship, among those who attribute the break-up mainly to the other person; and among those who, having broken up have not found a new romantic interest, or have plunged deeply into a new relationship. Some of the results are moderated by interaction effects with sex or respondent.

*KENTOR, Jeffrey (Johns Hopkins). "Structural Determinants of Peripheral Urbanization: The Effects of International Dependence."*

This paper examines the extent and mechanisms by which dependence on foreign investment affects urbanization in underdeveloped countries between 1950 and 1970. Using panel regression analyses and structural equation models on a sample of 37 peripheral countries, investment dependence is found to have a lagged positive effect of 5 to 15 years on urbanization. The data suggest that investment dependence stimulates growth in the informal and tertiary labor sectors, while inhibiting growth in the industrial labor sector. This increased relative growth of the informal and service labor sectors is characteristic of the urban structure of underdeveloped countries: what I term "peripheral urbanization." It is hypothesized that the excessive growth of these sectors provides a reserve of "underemployed" workers for periods of economic expansion and, also, to suppress wages.

*KERBO, Harold R. (California Polytechnic) and L. Richard Della FAVE (North Carolina State). "Institutional Investors, Stockvoting, and Control of the Corporate Economy: New Evidence and a Reinterpretation."*

One of the longest running controversies in the social sciences has been that over the ownership and control of major corporations. On one side it is the "ruling class" thesis which argues that wealthy families continue to dominate the economy through their ownership and control of the major means of production in the society. On the other side is the "managerial control" thesis which argues that ownership is so widely distributed that managers of separate corporations are in control of these corporations. Through an examination of a massive new source of data compiled by a Senate committee, pertaining especially to an increasing expansion of stock control by institutional investors, we argue that both sides in this debate are inaccurate. We offer a third thesis, "institutional control" of the economy, which combines strong points from both of the previous views, and which we believe provides a better fit with the data.



KOO, Hagen (Memphis State). "Center-Periphery Relations and Marginalization: Empirical Analysis of the Dependency Model of Inequality in Peripheral Nations."

The center-periphery model of the dependency school suggests that significant social inequality in dependent economies develops along the center-periphery sectoral axis, where those participating in the internationalized section benefit collectively, while those segregated from it suffer marginalization. This paper examines census and survey materials pertaining to development patterns and social inequality in South Korea, and suggests several important ways in which this model needs to be modified. The major conclusion of the study is that in a semi-industrial nation like Korea, the center-periphery dimension of inequality is muted by more significant class relations in the internationalized sector, particularly involving young female workers, and by dynamic adaptation of the petty bourgeoisie taking advantage of accumulated resources in urban centers through various informal economic activities. At least in economically more developed peripheral nations, the traditional Marxist class model seems to fit the realities of inequality better than the new dependence model; but neither model is believed to be fully adequate, without important modifications, for explaining the multiplicative structure of inequality in developing societies.

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LIN, Nan (SUNY - Albany), Alfred DEAN, Walter M. ENSEL and Mark TAUSIG (Union). "Social Support and Depression in the Life Course."

The paper describes an attempt to consider two structural factors--the strength of social ties and social resources--in articulating the process by which an individual arrives at an occupation and attains the status associated with it. Drawing up data from a representative sample of males in the 21-64 age range among the non-institutional civilian labor force in the Albany, New York metropolitan area, we identified those who had used social ties in seeking first and last jobs. The occupational status (Duncan's SEI score) of the tie was used as an indicator of social resources. The strength of the tie between the respondent and the source was indexed by the dichotomy of (1) the weak ties: acquaintances and indirect ties, and (2) the strong ties: relatives, friends, and neighbors.

Analyses support the thesis that it is the social resources reached rather than the strength of the tie that has the greater effect on attained status. The ability to contact a high status source is affected by both one's personal resources (initially by one's family background, but eventually more by one's educational and occupational achievements) as well as by the use of weak ties. As such sources are progressively evoked from one's constructed relations rather than ascribed relations, the source's strong tie with the hiring firm becomes increasingly important. These patterns hold up when alternative measures of social resources (educational status of the source) and status attainment (income) are examined.

Thus, we suggest that for a class of social actions identifiable as instrumental for the individual involved (e.g., seeking a job), resources reached through the social networks probably have much to say about the outcome of the actions (e.g., attained status).

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LINCOLN, James R. (Indiana), Mitsuyo HANADA (SANNO Institute of Business Administration) and Jon OLSON (Akron). "Cultural Influences and Individual Reactions to Organizations: A Study of Japanese-Owned Firms."

This study addresses the proposition that Japanese and American employees have different cultural orientations toward work organizations and therefore react differently to the same organizational structures. In contrast to the widely held view that highly differentiated organizations have isolating and alienating effects on their members, we review discussions of Japanese culture and social structure which suggest the hypothesis that Japanese organizations become more cohesive with vertical differentiation. Those same discussions, however, suggest that Japanese employees--as many writers argue of American employees--experience reduced social integration and work satisfaction as the internal structures of their organizations differentiate horizontally. We use data gathered in a survey of Japanese, Japanese-American, and American employees of Japanese companies in the United States to assess these and related propositions concerning cultural differences in the reactions of these groups to the organizations employing them. Our key findings are: (a) There are no differences by national origin in levels of social integration, but Japanese and Japanese-American employees are significantly less satisfied with their organizational involvements than Americans. (b) Although we do find evidence of certain value differences by national origin in employees' perceptions of organizations, these fail to account for the lower satisfaction levels of the Japanese and Japanese-Americans. (c) Vertical differentiation in these organizations raises integration and satisfaction for Japanese and Japanese-American employees, while horizontal differentiation reduces these. (d) Neither vertical nor horizontal differentiation affects the social integration or work satisfaction of American employees.

McQUILLAN, Kevin (Western Ontario). *"Urban Migration and the Origins of the European Proletariat."*

The movement of workers into industry and the development of wage labour were central aspects of European social and economic development in the nineteenth century. In each case, migration to the cities played a central role. However, little is known about the factors responsible for the great regional variations in the extent of urban migration. In this paper, two contrasting views of the impact of modernization and development on migration are compared and tested using four indicators of modernization. The results indicate that the four indicators of modernization are only weakly interrelated and consequently neither model received strong empirical support. It is found, however, that individual indicators of modernization are strongly linked to urban migration. It is suggested that future research concentrate on these relationships rather than attempting to construct a general model of the relationship between modernization and internal migration.

OLSON, Philip (Missouri - Kansas City). *"Urban Neighborhood Research: Its Development and Current Focus."*

The renewed interest in the city as a place of residence prompts a review of the entire sociological literature on urban neighborhoods beginning with the earliest studies in 1904 to all published research through 1979. The purpose of the paper is to assess what is known about the neighborhood and what future research is needed. There are three sections: (1) the principal themes in the literature; (2) the problems and limitations of the literature; and (3) the major contributions that can be aggregated from the literature. Six themes are identified and analyzed: the neighborhood as: (1) a form of social organization, (2) an ideology, (3) a determinant of behavior (neighborhood as an independent variable), (4) discontinuities in research, and (5) inadequate theorizing. Despite these limitations some continuity exists in the literature; the major contributions are attempts to explore the theoretical question of social integration as reflected in the degree of social attachment and social cohesion. The paper has a 10-page bibliography.

PALMER, Donald (SUNY - Stony Brook). *"Broken Ties: Some Political and Interorganization Determinants of Interlocking Directorates among Large American Corporations."*

Research aimed at elucidating the power structure of the American economy relies substantially on evidence of interlocking directorates among large corporations. The interpretation of this evidence is based on assumptions derived from the dominant paradigm of interorganizational relations in the sociology of organizations. This paradigm views organizations as actors and directors as agents of these actors. Specifically, researchers assume that interlocks are vehicles of intercorporate control relationships. In this paper we create a typology of interlock ties based on the dominant paradigm. We then examine the continuity of accidentally altered and broken ties of various types in order to test the application of the dominant paradigm to interlock research and the assumption that interlocks are vehicles of control. The results reported here indicate that interlocks are seldom vehicles of control and that the dominant paradigm, as it is applied to interlock research, is inadequate. An alternative paradigm which views directors as actors and organizations as agents is presented to explain the significance of interlocking directorates in light of these results.

QUADAGNO, Jill S. (Kansas). *"Modernization and Retirement: A Socio-Historical Analysis of the Economic Position of the Aged in 19th Century England."*

According to the most commonly expressed theory of age stratification, older people were revered in traditional society, maintaining power and prestige solely on the basis of age. The forces of industrialization or modernization disrupted this universal pattern, reducing the aged to a secondary role in society. Three factors associated with modernization have been identified which have accelerated rates of retirement, leading to a reduction in monetary reward and psychological satisfaction for the aged. They include the rise of technology, the decline of agriculture, and demographic change including life expectancy increases and societal aging. Using data from nineteenth century England in a case study, this paper examines the effect of each of the above factors on retirement and reassesses the meaning of the aging and modernization argument.

STACEY, Judith (California - Davis). *"People's War and the New Democratic Patriarchy in China."*

This case analysis of family revolution in China counters the widespread theoretical misunderstanding of the relationship between family transformation and Communist revolutions. It analyzes the implicit family policy of the land reform, cooperatization, and military policies of the Chinese revolution to illustrate the dialectical nature of family and revolutionary change. It argues that Communist revolution in China played an ironic role in saving peasant family life by restoring and reforming traditional family practices. A unique family system, the "new democratic patriarchy" was created thereby, and this reconstruction process had profound, formative effects on the development of the successful revolutionary strategy of People's War.

STEINBERG, Lois S. (NORC). *"Preexisting Social Ties and Conflict Group Formation."*

Two schools of thought dominate the sociological literature on the relationship between community attachment and participation in organized protest. According to one, reflected in "mass society" theories, opposition is attributed to the sudden activation of previously "unattached" individuals or uprooted collectivities. This view was challenged by scholars in the 1960s and has recently come under renewed attack by mobilization theorists who maintain that attached individuals or organized collectives are the most likely to engage in sustained protest.

To test these assumptions, we examined the preexisting social ties of the initiators and initial recruits in five conflict groups mobilized around education issues in a suburban community. One purpose of the study is to explore the impact of innovations formulated at the national level on grass roots participation. A longitudinal comparative design based on a network approach was employed to reconstruct the history of the groups in terms of recruitment, issue development, strategy and outcomes. Data collection methods included open-ended interviews, questionnaires, participant observation and content analysis of newspaper articles.

In all cases the mobilization of the conflict group took place outside of established community institutions. While the initiators were marginal individuals, they recruited allies who occupied central positions in the organizations active in school and community affairs. Findings suggest that where innovations are controversial, the creation of an ad hoc structure is an efficient mobilizing strategy. It enables marginal citizens to develop leadership without fulfilling the traditional prerequisites for leadership, provides low risk participation for established leaders and avoids the collective goods dilemma usually encountered by large organizations.

SZYMANSKI, Albert (Oregon). *"Imperialism, Structuralism and Cleavage in the Corporate Elite."*

It is argued that the difference between structuralist and "instrumentalist" views of the nature of the state have been exaggerated. An attempt is made to synthesize them, essentially on structuralist grounds, but without dismissing the valuable contributions of the instrumentalists. The very real differences in the U.S. capitalist class and in the capitalist classes of the less developed countries have a structural basis in the positions of varying segments of these classes in the capital accumulation process. But foreign policy questions in the developed countries cannot be left to the sometimes slow working of purely structural mechanisms. Therefore, direct intervention is needed in both cases. The segment of corporate capital with the greatest stake in the U.S. overseas investments (those with which the Rockefellers are associated) normally directly guide U.S. foreign policy in relation to the less developed countries (Dulles, Rusk, Kissinger, Brezinski, etc.). In the less developed countries the "internal bourgeoisie together with the pure "comprador bourgeoisie" has had the hand in imposing military or other authoritarian rule in the joint interest of themselves and the transnational corporations. The compatibility of the allies in this colation is, however, being undermined with the reassertion of "national bourgeoisie" components within the capitalist classes of the less developed countries.

TARDANICO, Richard (Tulane). *"Revolutionary State-Making and the Limits of Nationalism: Mexico, 1924-28."*

Upon assuming power, the regime of Plutarco Elias Calles confronted the task of centralizing and rationalizing Mexico's revolutionary new state. In spite of what had been accomplished by the preceding government of Alvaro Obregon, formidable obstacles remained to be overcome: the growing economic and politico-military power of the United States; a weak, disarticulated native bourgeoisie; rival military and civilian bosses; and lingering popular unrest. Foreign and domestic resistance did more than create political instability; it also restricted the state's capacity to secure financial resources and to channel them into the development of a more independent national economy. What the Calles administration had to do, then, was this: to subordinate centrifugal sociopolitical and economic forces under the direct authority of revolutionary state-building leadership.

This essay addresses the way domestic institutional and world politico-economic forces shaped the course of revolutionary state-formation in Mexico during the Calles presidency. It focuses on two questions. First, how and to what degree was revolutionary state power consolidated? Second, what was the role of the regime's state-making gains to the long-term transformation of Mexico's relationship to the world capitalist system?

TURNER, R. Jay (Western Ontario). *"Experienced Social Support as a Contingency in Emotional Wellbeing."*

The relationship between social support and psychological well-being is considered in the context of four ongoing studies that provide evidence on their empirical association. These studies are: (1) a longitudinal study of new mothers that is concerned with adaptation to the mothering role (n=300); (2) a study of mothers known to be maladapting in their parental role (n=80); (3) a study of the psychosocial impact of hearing loss acquired in adulthood and of factors that influence or ameliorate that impact (n=900), and (4) a pilot study on the mentally ill in the community (n=100).

In all four studies our primary measure of social support is a slightly modified version of an instrument developed by Sidney Cobb and his students at Brown University. However, locally generated indexes for estimating social support are also included in each study. Results presented include: (a) analyses of the internal reliabilities of social support measures and on their interrelationships across all four studies; (b) analyses of the formal properties of employed measures of psychological well-being; (c) relationships between social support and psychological well-being across the four states; (d) from the longitudinal studies, evidence in temporal priority with respect to the relationship and on the impact upon the relationship of an experimental social support intervention.

VERBRUGGE, Lois M. and Charlene E. DEPNER (Michigan). *"Sex Differences in Health-Testing Sociological Hypotheses."*

Health surveys generally show higher rates of illness, disability days, health services use, and drug use for females than males. Speculated reasons for these sex differences involve genetic risks; acquired risks due to social roles, life styles and health habits, and stress; "illness behavior" (symptom perception and evaluation, and propensity to take health actions); and reporting behavior during interviews. In 1978, the Health In Detroit Study was conducted to test hypotheses about sex differences in health, especially hypotheses about illness behavior. The study included an initial interview, six weeks of daily health records for each respondent (R), and a termination interview. The study population is white men and women living in the Detroit metropolitan area. This paper examines initial interview data (N=714).

Sizable sex differences appear in these health variables: self-rated health status, number of chronic conditions experienced in the past year, restricted activity and bed disability days in the past year, visits to medical doctors in the past year, number of medicines or treatments currently taken for chronic conditions, whether R takes other pills or medicines regularly for preventive purposes. Descriptive results on how health differs by employment status, marital status, and presence of children for men and women. Then multiple regression models are used to answer: (1) How do men and women differ in health attitudes and beliefs, time constraints, sociodemographic statuses, stress, life styles and health habits, access to health services, and reporting behavior? (2) How do these variables influence health and health behavior? (3) How much do they account for sex differences in health and health behavior? In particular, how important are health attitudes and personal time constraints? (4) Are there any significant sex differences after illness behavior is taken into account? The discussion focuses on several popular questions: Are women "really" sicker than men? If so, how can they end up with lower mortality rates? If not, why do surveys show them to be sicker? (And how can social scientists help answer these questions?)

WALSH, Edward J. and Marylee C. TAYLOR (Pennsylvania State). *"Macro- and Microstructural Influences on the Self-Esteem of Workers in Seven Occupations."*

Samples of workers in seven occupations were used to examine relationships between social position and self-esteem in a series of analyses which expand conventional operationalizations of both these key variables. Our occupations range from garbage collector at the bottom of the prestige hierarchy to professor at the top. Self-esteem indicators include not only a global self-esteem measure, but also occupational, family, and sociability factor scales derived from a battery of specific self-esteem items. We assess the impact of position with work and family microstructures on self-esteem, comparing these micro-level influences with that of macro-level occupational prestige. Our findings support the notion that macro-indicators are modestly positively related to global and occupational self-esteem, but they also suggest that occupational prestige is unrelated to sociability self-esteem and negatively related to the family self-esteem dimension. The influence of our micro-level status measures is also modest, but on certain dimensions these indicators explain more self-esteem variance than occupational prestige. We conclude that the relationship between occupational prestige and self-esteem is more complex, and less strong, than customarily alleged.

*continued on page 51*

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# COMPUTER PROGRAMS

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## *APPROXIMATE NORMS AND SIGNIFICANCE TESTS FOR THE LINGOES-BORG PROCRUSTEAN INDIVIDUAL DIFFERENCES SCALING (PINDIS)*

*Rolf Langeheine (Institut für die Pädagogik der Naturwissenschaften an der Universität Kiel, Kiel, West Germany)*

The MDS-like technique LINGOES-BORG PINDIS (for Procrustean Individual Differences Scaling) does not only enable the researcher to give answers to questions such as 1) what is the structure common to N individuals, and, what degree of communality may be realized among N individuals; 2) to what degree may the common structure be considered adequate in mapping individual structures; but offers a number of advantages over previous models: 1) Due to hierarchies of so-called admissible and inadmissible transformations, PINDIS allows for a much deeper insight into differences possibly existing between individual structures. 2) Since PINDIS starts from assumption-appropriate prescaled configurations instead of similarity/dissimilarity matrices, more general types of data matrices may be analyzed. 3) Contrary to some vector models, PINDIS represents a genuine distance analysis.

In total, PINDIS allows the researcher to decide for a maximum of five transformations. Among other things, the analysis will provide fit measures in the form of squared product moment correlations indicating the communality between each individual configuration and a centroid structure derived from all individuals. Since it has been repeatedly stressed by LINGOES and BORG that inferences about differences within the total set of individual configurations should only be made if the inadmissible transformations result in a substantially higher fit as compared to the admissible transformation, questions such as the following arise: 1) What degree of fit may be said to be substantial for any single transformation; 2) when should one judge the increment in fit arrived at by a more complex transformation as compared to a simpler one to be significant?

LINGOES and BORG (1978: 516) ". . . suggest a certain amount of pragmatism in exploring . . ." such questions, that is, any user of PINDIS has to resort to some rule of thumb which he might feel more or less comfortable with. Therefore, "it would be interesting to know . . . how well various random configurations could be explained by their centroids, of course, since we presently lack a statistical theory of our fit measures" (LINGOES and BORG 1978: 516). The aim of this report is to provide just this information by means of Monte Carlo simulation for a variety of cases where PINDIS might help a researcher to give answers to a lot of such questions.

The remainder of the report is organized in 6 sections. Section 2 gives a very brief overview of PINDIS. Section 3 provides a summary of Monte Carlo studies performed to evaluate various aspects in MDS and factor matching. The data generating procedure used in the present study is outlined in section 4 and results are presented in section 5. Using these results, different possibilities for evaluating the significance of various transformations available from PINDIS are presented in section 6, where, in addition, two examples are given. The final section 7 is devoted to a discussion.

(From Introduction to the Working Paper)

### MAPCLUS-ADCLUS

Phipps Arabie (Illinois) and J. Douglas Carroll (Bell Labs) have devised the MAPCLUS algorithm for fitting the Shepard-Arabie ADCLUS model. FORTRAN source copy tapes for MAPCLUS, as well as input data analyzed in the Appendices of the documentation are available (\$40) from Mrs. Irma Biren, Room 2F-128A, Bell Laboratories, 600 Mountain Ave., Murray Hill, N.J. 07974, U.S.A. A paper describing the algorithm has also been written. Arabie and Carroll are currently completing a program for fitting the 3-way generalization of the ADCLUS model: INDCLUS (Individual Differences Clustering).

### SNAP--SOCIAL NETWORKS ANALYSIS PACKAGE

The U.K. Social Science Research Council has awarded a grant to Nuffield College, Oxford to develop a computer package for the analysis of social networks. The first phase of this work has been completed (see CONNECTIONS I, 2 and II, 1) and a full specification of the package in the form of a users manual has been produced.

The package is intended to provide a number of basic facilities for analysing the interconnections among sets of elements, i.e., graphs. Some examples of such graphs would be the social network links within groups of people, interlocking directorships in firms, transport networks, co-sponsorship of issues in legislative bodies, the joint occurrence of concepts in political manifestos and trading links among organisations. Comprehensive facilities for the input, storage, manipulation and retrieval of data relating both to the inter-linkages and the attributes of the elements are envisaged. The command language will be based on the SPSS syntax. Important aspects of the package are that it is designed to be portable and to be capable of extension to include additional facilities.

Potential users of the package are now cordially invited to send for a copy of the specification and to suggest improvements and extensions to the package. The package will be fully implemented providing that the sponsors can be assured that there is sufficient demand for it. A copy of the specifications can be obtained from Clive Payne, Computing Unit, The Social Studies Faculty Centre, George Street, Oxford OX1 2RL, England.

CLIO: A DATABANK ORIENTED SYSTEM FOR HISTORIANS

*Manfred Thaller, Max-Planck-Institut für Geschichte, Hermann-Fogge-Weg 11, D-3400 Göttingen, West Germany.*

This general purpose system claims to offer a simple control language. It features:

- a flexible input system combining free field and tag/content representation of data that can be structured in very complex hierarchies;
- a retrieval system;
- a system for the interactive coding of historical sources: (Various ways of entering codebook-like 'thesauri' provide a cheap way to recode as often as necessary material of doubtful semantics);
- a system for nominative record linkage: (name comparisons by 2 classes of algorithms are supported; the entry of new algorithms to suit the dialects of a particular area is facilitated by a simple set of algorithm-defining directives). (from QUANTAM 15, 7/80: 40-65)

*continued from Abstracts, page 49*

*ZUCKER, Lynne G. and Carolyn ROSENSTEIN (California - Los Angeles). "Institutional Structure and Individual Characteristics as Explanations of Labor Market Processes and Outcomes: Dual Economy Reconsidered.*

Dual economy theory is reviewed, and small differences among the four major taxonomies of industrial structure are noted. Dual economy emphasis on the institutional-level explanation of labor market processes and outcomes is then compared to the more traditional focus on individual-level determinants (in human capital and status attainment theories). Data from the 1975 and 1976 NORC General Social Surveys are used to compare the results obtained using the four taxonomies and to compare the relative explanatory power of institutional-level and individual-level variables. Dual economy predictions receive mixed support, heavily dependent on the particular taxonomy used. Only two of the four taxonomies produce overall significant differences between the sectors, though all four consistently show higher income and lower proportion poverty workers in the core. Using a regression standardization procedure, both institutional structure and individual variables are found to have substantial effects on income differences between core and periphery: individual-level variables appear overall more important in explaining income differences, while institutional-level variables provide a somewhat stronger explanation for proportion with poverty earnings. These results indicate that taxonomy definitions need to be reconciled before further investigating dual economy predictions, and, most important, that institutional and individual explanations of labor market processes and outcomes are complexly interrelated.

# DIRECTORY UPDATE

Since *CONNECTIONS* published the *Special Directory Issue* (Vol. II No. 3 - Winter 1979), there have been several changes in the addresses listed. To help you keep track of friends, neighbours and relatives--we are listing those of you who have notified INSNA of your wanderings.

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Paul B. SLATER  
William B. STARNES  
Harvey STEVENS

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## INDEX TO CONNECTIONS

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Who would have believed it when we started in 1977? We have accumulated enough material to produce this giant Index\* to the first three volumes of CONNECTIONS.

The Index tells you where to find Computer Programs, Course Outlines, New Book listings, Research Papers, Research Reports, and Thesis Summaries. (Sorry, we just couldn't face the chore of listing the 1,000+ Abstracts!) The Index is organized alphabetically, by sections and alphabetically by author within sections. Each listing gives volume number, issue number and page numbers.

Be the first on your block to look up Peter Killworth and Russ Bernard's cry for "Help?!" (II, 1, 40-41).

\*Index compiled by Rosalinda Costa, Structural Analysis Programme, Department of Sociology, University of Toronto.



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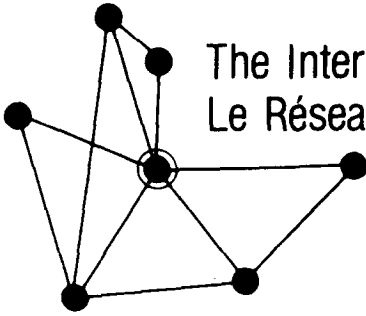
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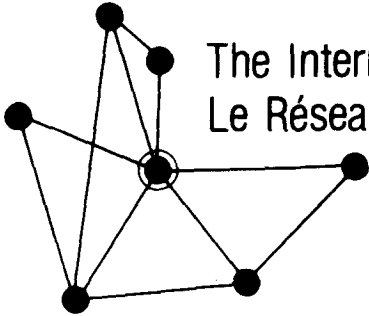
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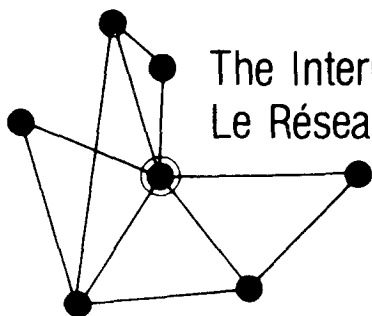
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