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ABSTRACT BONANZA ISSUE

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small print

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CONTRIBUTIONS are encouraged from members and colleagues: research papers of any length, reviews of applications of networks in different fields, comments and critiques, survey articles, computer programmes, conference information, abstracts, teaching aids, etc.

NETWORK NOTEBOOK

IN THIS ISSUE

Here we are starting our sixth big year...And while we were somewhat harried getting the last issue out-- what with Liviana and June's thesis defense and my trip to Russia--this time it really feels like an anniversary! And a bubbly issue too: J.A. BARNES' thoughts on network analysis lead us off (and apologies to all for delays in publishing it)...There's some solid things in Network Notebook, and interesting meeting info (Sunbelt, Canadians, etc.)...We've brought our abstracts and new books up to date...And what would an anniversary issue be without GRADAP? ...Looking ahead to the next issue, over 30 people have sent in brief reports for a giant research roundup. We have Nan Lin's final report on his major project all typeset and ready to go. Barry Wellman has contributed a "Friendship" bibliography, and one member has promised a major "terse" summary of all network findings.

FEEDBACK ON CONNECTIONS...AND BACK-FEED

Thirty-five network folk responded to our feedback questionnaire. Herewith the results, some readers' marginal comments, and some of our comments.

CONNECTIONS DEPARTMENT	% Like	% Use in Work
Research Reports	91	74
Theoretical Papers	83	69
Research Roundups/Bibliographies	86	86

New Book Summaries	91	71
Paper Abstracts	100	71
Thesis Summaries	71	54

Computer Stuff	43	43

Network Notebook	63	20
Meetings Calendar	63	20
Directory	57	23

Teaching Aids	34	14

Comments on specific sections: Clearly most people want and use Research Reports, Theoretical Papers (a pleasant surprise), Roundups, and Abstracts/New Book information. They want coverage of network research.

ABSTRACTS/NEW BOOKS *outstanding service. I mainly use CONN as an abstracting service -- this is very useful as I am peripheral to the field.*

I gave a conference paper which didn't get in. (We're very dependent on authors' sending in abstracts for non-journal papers. Send it in; better still, send in all the relevant abstracts for the conference. For published papers, we rely on CURRENT CONTENTS and slogging through libraries -- it would serve us a lot of work here, if you's send us the abstract -- prepublication, if possible.

Give author's university. (We do when we have it easily. But we abbreviate and leave the words "Department of" and "University" off; e.g., "Soc, Texas means "Department of Sociology, University of Texas.

Wider listing of network articles, less listing of non-network articles. (The only way we can increase our coverage of network articles is if we get volunteers to cover specific disciplines and countries. Please write us if you are willing. The "non-network" stuff is trickier. Part of it is definitional, but part of it comes from our desire to get network folks involved as broadly as possible with 'structuralist' thought. Lateral thinking is fun. But we have begun to edit books and abstracts more tightly as page constraints become more stringent. We're also coping by maintaining broad coverage but cutting down the info. we give you about each new book.)

COMPUTER STUFF: This serves a distinct, committed audience. Those who want it, want and use it very much; others don't see the point. As a leading-edge Newsletter, we're committed to this sort of thing. *Perhaps it could be published separately and abstracted in CONN. Keep it! More!*

NETWORK NOTEBOOK/MEETINGS CALENDAR/DIRECTORY: I gotta admit that one of the main reasons I put out CONNECTIONS is to write NETWORK NOTEBOOK. Not only does it give me pleasure, it reflects strongly my belief that we should take our field seriously (and defined broadly), but we should never take ourselves seriously. I'm disappointed that a sizeable minority do not like it and that most do not use it. I've already started editing it a bit more tightly. But one person wrote *Love it!*

MEETINGS CALENDAR and DIRECTORY are more overtly service departments. Clearly, they could do better, although both take a lot of effort and space to put out. We'll try to edit Meetings Calendar more tightly to reduce costly, non-useful info.; we can only improve our coverage here if people send us conference news well in advance. We don't know what the dissatisfaction is with Directory: we use it all the time happily. We suspect that we need to sort Americans by state and to come up with tighter, better keyword descriptors. Anyone willing to do the latter job?

TEACHING AIDS clearly hasn't been successful, mostly we suspect because we haven't done much with it and not because of dissatisfaction with the little (course outlines) we have done. Any suggestions?

GENERAL COMMENTS ON CONNECTIONS

Kudos: Please keep it as informal as it is. (J. Clyde Mitchell); *Do an important job in reviewing all the literature.* Gregory McGuire; *Good work, Donald Ungar; Keep up the good work -- 1 of the few things I really read --* Nancy Chapman; *No complaints, excellent,* Alden Klovdahl; *Like it all,* Werner Degenhardt; *All great,* Wm. Richards; *Best journal I get. Hurrah for Barry,* Charles Kadushin; *It's perfect,* Nancy Howell; *A fine job. I Hope you're proud of it,* Beth Mintz; *Thanks,* Ben Salzter.

Suggestions: More practical, less esoteric -- my work is not academic. Roger Pritchard. (We're concerned primarily to develop the network analytic paradigm -- its theoretical, methodological and substantive implications. We hope that network practitioners (*networkers*) will find this material useful in improving their practice. We also would be delighted to publish practical reports/tests, etc. from the field feeding back on the application of network ideas. But a lot of the *networking* stuff right now is mostly cheerleading -- repeating that it's good to keep connected through nonhierarchical structures. It's time to move beyond that perception.

Add job opportunities, Helmut Anheier. (We'll run them in Network Notebook as received. Yet most jobs are not explicitly for network analysts, and the disciplinary newsletters probably do this more efficiently.)

How about an electronic messaging network using TELENET, etc.? Wm. Richards. (When the NSF was funding the EIES system, about 20 network folks did this under the aegis of Lin Freeman with mixed results. As soon as the real \$ had to be paid, almost all left, with the rest straggling off. It's expensive (\$8/hr for Americans, \$12/hr for Cdns., \$30+/hr. elsewhere), and (sad to say) many people don't have much to say much of the time. It's no fun having a good messaging system if you don't have someone to talk with, so a whole bunch of people (or a few big talkers) have to be on together. If you're interested, contact network fellow traveller Murray Turoff (the head of EIES) at the New Jersey Institute of Technology. We'll do our best to help here.)

More on research grants and contracts, Normand Leavy. (Anyone know how we can get such information regularly and timely?)

And a Big Problem: Although those who have renewed seem happy, renewals are way down from this time last year (by 75+). This hurts, as the cost of prep. is the same no matter our size, and the cost per copy printing increases. Suggestions wanted. BUT ALSO ACTION. Don't assume that your obvious buddy has remembered to send in his/her \$12. We're enclosing another renewal sheet. Please pass it on to a friend. And we're enclosing an institutional membership sheet. Only about a dozen libraries now subscribe, and their higher dues would really help us survive. So send them the sheet with an urging cover letter, and a photocopy of recent Contents pages.

But let's not end on a downnote. We've survived -- and done good stuff -- for five years. This is our 16th issue! And the field has really developed over time! Sort of inspires me to write a stock-taking piece.

A QUICK START TO NETWORK ANALYSIS

You'd be amazed at how many of your friends, colleagues and relatives don't know where to begin when reading about network analysis. Even some INSNA members suffer from this problem, although won't admit only when at their fifth planter's punch around the pool at the Sunbelt conference. There hasn't been much good introductory stuff since the early Barnes, Mitchell, Whitten and Wolfe pieces -- everybody was off doing his/her own specific studies.

Now lots of useful materials are at hand. Herewith, a biased beginner's guide:

1. S.D. Berkowitz, AN INTRODUCTION TO STRUCTURAL ANALYSIS, Toronto: Butterworths, 1982. A slim, inexpensive paperback overview of theory, method and substance.
2. David Knoke and James Kuklinski, NETWORK ANALYSIS, Beverly Hills, Sage, 1982. A slim, very inexpensive paperback detailing network analytic methods in lucid prose.
3. Barry Wellman (immodestly), "Network Analysis; From Method and Metaphor to Theory and Substance." SOCIOLOGICAL THEORY 1. (San Francisco: Jossey-Bass, 1983). A long paper linking network analysis with other structural sociologies (e.g., world-systems analysis), and distinguishing it from non-structural sociologies. Lots of literature review. (Also available from INSNA office as SAP W.P. 1B for \$4).
4. Ronald Burt, "Models of Network Structures," ANNUAL REVIEW OF SOCIOLOGY 6. A lengthy review of methods for studying structure.

Once you've knocked off these you can go on to Sam Leinhardt's SOCIAL NETWORKS compendium and the reading list Lin Freeman helpfully provided in CONNECTIONS IV, 2. You'll then be ready to dip into the immensities of all the references given in Feger et al's bibliography (see below). And don't forget to check out Ron Burt's new TOWARD A STRUCTURAL THEORY OF ACTION -- brave title, and nice guide to integrating theory and contents) and Burt and Michael Minor's edited, APPLIED NETWORK ANALYSIS. And please, please remember the old favourites such as Nadel and White, Boorman and Breiger.

THE PROBLEM WITH VOLUNTARISTIC ANALYSIS

He no more knows his destiny than a tealeaf knows the history of the East India Company (Douglas Adams THE HITCHHIKER'S GUIDE TO THE GALAXY. London: BBC, 1978).

IF YOU DIDN'T GET LAST ISSUE AROUND XMAS TIME (V,3), LET US KNOW!

Through a mix-up, we sent out some empty envelopes.

ON WRITING DATES AND PUBLICATION DATES - Barry Wellman

My review paper, "Network Analysis: Some Basic Principles" is coming out March, 1983 in SOCIOLOGICAL THEORY 1983, Although I cited some 250 network studies, undoubtedly I left one of yours out.

A partial explanation is that despite the date of the book, ASA politics has delayed its publication for two years. My piece was substantially finished in 1980 and delivered to the editor in 1981.

Fortunately, all is not lost. I'm publishing a somewhat revised version in a book Steve Berkowitz and I are editing for Cambridge University Press (tentatively called STRUCTURAL SOCIOLOGY), and I've tried to bring the piece somewhat more up-to-date. But I've probably still left a lot of useful stuff out. Please forgive me, but just think -- it's nice that so many people are doing so much good stuff.

TOWARDS MORE PERSONAL CONNECTIONS

In thinking about how CONNECTIONS can evolve during the next 5 years, it struck me as useful to encourage more "personal" stuff -- the kinds of things we usually say to each other now only after 5 margaritas at Sunbelt conferences. (See above for 1 example). Off-beat "bright" ideas, thoughts on the direction of the field, thoughts on problems with an area of research -- these sorts of things. If you're shy or don't want to make enemies, please use a pseudonym (altho to protect ourselves, we insist that all letters to us be signed).

LIFE IS A NETWORK

"In the past, the failure of embryogenesis to yield to the Cartesian program of cut and past has led to an alternative of an obscurantist holism or, worse, a belief in nomaterial life forces. This groups solutions are a version of constrained relationalism. The properties of organisms are consequences of the particular interactions that occur between bits and pieces of matter, so it is laws of interaction that we must study. But these interactions, although unique to different interacting parts, are constrained by the nature of the parts themselves. The properties of water are the outcome of a unique interaction of hydrogen and oxygen, but the kinds of interactions that oxygen can enter into are different from those in which, say, nitrogen takes part and are to some extent, predictably different.

From R.C. Lewontin's NEW YORK REVIEW OF BOOKS review (20 Jan. 83, p. 36) of AGAINST BIOLOGICAL DETERMINISM and TOWARDS A LIBERATORY BIOLOGY, both ed. by Steven Rose. New York: Schocken).

NETWORKS ARE FOR MORE THAN JUST PEOPLE

Social networks, as we tell folks ad nauseam, are like persons, groups or other social entities. But networks, in general, can link any things; cities, words, etc. Ted Nelson suggests that we get away from linking ideas only by sequentially written sentences (like this one). He says that with computers' capacities for relational data bases and information retrieval, we can do much more with multidimensional structures of ideas, branchings, etc. See his book LITERARY MACHINES (\$15 from Nelson, Box 128, Swarthmore, PA 19081).

Peter and Trudy Johnson-Lenz (good INSNA members) have done similar work with computer programs. For example, their TRANSFORM computerized conferencing system greatly facilitates forming sub-sub-groups, finding out what other groups are doing, and creating new links between previously separated clusters.

(Our thanks to OTHER NETWORKS, 1, 4 which started us thinking about this stuff).

¹In fact, footnotes (parenthetical comments) -- and, of course, dashed phrases are currently our only rather terse (and limited) non-linear remedies. (But see Robert Merton's ON THE SHOULDERS OF GIANTS for what you can do with these.)

EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT N.A. AND MORE

Hubert FEGER (Soc, Hamburg), Hans HUMMELL (Soc, Duisburg), Franz Urban PAPPI (Soc, Kiel), Wolfgang SODEUR (Soc, Wuppertal) and Rolf ZIEGLER (Soc, München), eds. 1981. BIBLIOGRAPHIE ANALYSE SOZIALER NETZWERKE.

This bibliography has been produced as an internal working bibliography. Besides contributions of the above mentioned project groups, it includes selected sources of literature taken from Linton C. Freeman's 1976 "A bibliography of social networks" as well as contributions from Wolfgang Bick and Paul J Mueller (Köln). It contains a source listing of the literature, and a KWOC descriptor listing of the literature.

Feger et al promise that if you send them a magnetic tape (700 m/2298ft), they will record the bibliography on it (9 track, EBCDIC, 1600bpi):

File 1: FORTRAN IV programs producing

(1) a condensed keyword list giving frequency of keywords' appearance; 2) printout of a descriptor-statement based on selected keywords;

File 2: a descriptor-sorted bibliography

File 3: a bibliography in alphabetical order, ready for printing.

Send your tape to: Professor Dr. Wolfgang Sodeur, Gesamthochschule Wuppertal, Fb. Wirtschaftswissenschaften, M 13.15, Gausstrasse 20, 5600 Wuppertal 1, West Germany.

BUCKS FOR NETWORK RESEARCH?

Sam STERNBERG. 1982. NATIONAL DIRECTORY OF CORPORATE CONTRIBUTIONS. San Francisco: Regional Young Adult Project (944 Market St., S.F., CA 94102).

Provides data on 600+ companies and their philanthropic giving patterns. (A floppy disc version, with search facilities, may soon be available.)

BIG BUCKS IN CORPORATE INTERLOCKS

The new (US) Federal Trade Commission report, "Competition & Collusion in Electrical Equipment Markets" examines the impacts of conspiracy and subsequent antitrust conduct remedies on performance in electrical equipment markets. Available from Govt. Printing Office as 1982: 0-389-306. (Thanks to Robert Faulkner for mentioning this; he says it's a "good economic study", but no raw data on connections.)

MAKE 78 MILLION BUCKS (after taxes) THROUGH NETWORK ANALYSIS

Most North American network folks know about Federal Express: They're the people who get our grant proposals in on time through guaranteed overnight delivery continent-wide. But they really make their money by helping large companies minimize their inventory costs and repair down-times. They've been phenomenally successful: more than doubling their earnings per share between 1979 and 1982. Revenues were \$800M+ in '82, and operating income before taxes \$119M+.

Each day, Fed Express' planes fly directly from 91 airports to Memphis, TN, most arriving between midnite and 0100. Everything is unloaded there, sorted by destination and reloaded. The aircraft then fly back to where they came from, carrying only packages destined for that area.

The secret of Fed Express' success is network analysis (although they ain't never been INSNA members). They've standardized all shipments to a two-step path length. While even shipments between neighboring cities (e.g., San Fran. - L.A.) go via Memphis, nothing takes three steps to get anywhere. (For alternatives, try the Canadian or US Post Offices.) Symmetrical to/from patterns for cities mean they can use the same size plane in both directions. And centralization of sorting at their Memphis "Superhub" (the ultimate in "betweenness") means that they can use very high-powered equipment there.

Fed Express' personnel policies also are interesting. They are a complete dual labor market onto themselves. They brag that they have "a policy of not furloughing employees, short of corporate survival. When the company hires someone it views this as a long-term investment" But, there are employees ... and employees, for "use of part-time personnel permits operations to expand or contract with traffic levels."

To top it off, one of the company's key corporate slogans is that they are "a network of networks." Should Craven & Wellman (UAQ, 1973) be flattered or sue?

IS THE UNIVERSE A NETWORK?

"Radio maps of a band of galaxies 700 million light years long ---the largest continuous structure yet charted on the sky -- reinforce a growing conviction among astronomers that the universe may be something like a Swiss cheese. Its material may be clumped in "superclusters" of galaxies, linked together perhaps by narrow bands of galaxies, with vast empty regions in between. This contradicts the classical assumption of cosmologists that, on the average and on the large scale, the universe is a homogeneous blend of matter and energy ...

"F. Shandaring of the Institute of Applied Mathematics in Moscow has used a technique called 'percolation theory', which analyzes the degree of connectedness, not just the clumpiness of structures. This analysis suggests a basic structure of strings of galaxy clusters linked in a network with voids between strings ...

"The emerging picture of galaxies grouped into a network of fairly flat superclusters connected by narrow bands favors the pancake theory (that matter first condensed into thin sheets or pancakes that then broke up into galaxies and galaxy clusters." Edited from Robert Cowen, CHRISTIAN SCIENCE MONITOR, 3 Dec. 82, contributed by Peter & Trudy Johnson Lenz.) Perhaps Davis-Holland-Leinhardt have been looking in the wrong place.

INTRODUCING OUR EUROPEAN EDITOR

Hans Joachim Hummell has been Professor of Sociology at the University of Duisburg, West Germany since 1974, a meteoric career for one born in 1941. An active member of the active West German social network analysis group, Hummell combines theoretical, quantitative and substantive interests in this study (with Wolfgang Sodeur) of the development of an acquaintance and information network among university students.

Hummell's broad interests are in integrating social psychology into sociological theory, causal analysis and experimentation design, the methodology of formalization, and multilevel analysis.

He has organized 3 international network analysis conferences in Bad Homburg, edited the books that came out of them, and edited a 3-volume series on "Correlation and Causation." Some of his recent working papers are:

--"Baseline models for evaluating structural effects of interpersonal tendencies for balance in theories of the Davis-Holland-Leinhardt type" (ARBEITSBERICHT ANALYSE SOZIALER NETZWERKE, CH Duisburg & GH Wuppertal, 9/81), with K. Echterhagen, L. Krempel and W. Sodeur,

--"An alternative strategy for testing structural models of the Davis-Holland-Leinhardt" (same book and co-authors).

Han Hummell is very anxious in keeping folks everywhere in touch with European network folk, and in keeping European network folk in touch with each other. Clearly INSNA can do more here. But we need help from participants. So please send him conference news, abstracts, research reports, etc.

GERMAN HISTORICAL STATISTICS

The Deutsche Forschungsgemeinschaft has set up a new priority research program which aims at the reconstruction and preparation for machine-readable use of German historical censuses: The main purpose of this priority program is to make available time series data about German society and economy in the 19th

and 20th centuries. It is intended to include data from the pre-statistical period before 1800 too. The Center for Historical Social Research is involved in this priority program on three levels:

- It is to work as a "priority program consultant", consulting the projects of the program mainly about technical and edp problems. Securing the technical comparability of the data sets, which will be created by the projects, is one of the purposes of this consultation.
- The machine-readable files prepared by the projects of the priority program will be archived and made available for secondary analyses in/by the Center.
- Part of the Center's involvement in the priority program is the preparation of the criminal statistics of the German Empire for machine-readable use.

Among the projects are:

Hartmut Kaelble (Berlin), "Social mobility in Berlin during the 19th and 20th centuries"
 Dieter Groh (Konstanz), "Statistics of industrial conflicts in Germany, 1700-1889"
 Jürgen Schneider (Nürnberg), "Hamburg trade from the 18th century to 1914"
 Heinrich Volkmann (Berlin), "Statistik der Arbeitskämpfe in Deutschland, 1933-1980"
 Jürgen Kocka (Bielefeld) and Hartmut Kaelble (Berlin), "Social mobility and marriage patterns in Germany during the 19th and 20th centuries:"

(Source: QUANTUM 23).

SOMETHING TO THINK ABOUT THE NEXT TIME YOUR BLOCKMODEL KEEPS ITERATING

He who sees the Infinite in all things, Sees God.

He who sees the ratio only, sees himself.

William Blake, "Application," 1788

DEPENDENCY (THEORY) IN THE SOVIET UNION

"A Country That Lacks Economic Backwaters: Today we have got rid of backward regions and we have no economic periphery -- instead smooth economic interaction is the main feature of our national economy, writes IZVESTIA. The economy of Kazakhstan, for example, is fed by 96 industries located outside the republic, mainly in the Russian Federation. And Kazakhstan, in turn, functions as a source area for 74 industries distributed among the other constituent republics. Fourteen republics work for 93 Moldavian industries whose products are essential for 72 industries elsewhere in this country. 82 industries in Georgia work for the whole country in exchange for products of a hundred industries."

(Source: MOSCOW NEWS 27 Nov. '82)

INFO FLOWS

MOVES: Wesley SHRUM now at Soc, Louisiana State ... James BARON now at Grad. School of Business, Stanford ... Leonard PEARLIN now Director of Human Development & Aging Program at Cal-San Francisco ... Charles JONES promoted Associate Prof. at Soc, Toronto. Jessica LIPNACK and Jeffrey STAMPS on Advisory Board of Calvert Social Investment Fund, a socially-conscious mutual fund ... Daniel BERTAUX (Soc, Paris) to be Visiting Prof at Montreal and Laval, 1983-84 ... Bonnie ERICKSON on leave at Survey Research Ctr, Cal-Berkeley, 1983-84 ... Barry & Beverly WELLMAN on sabbatical at Institute for Urban & Regional Development, Cal-Berkeley, 1983-1984 ...

HONOURS: Charles Tilly has won the "Common Wealth Distinguished Service Award" (see feature story below) ... Ron RICE has won an award for outstanding thesis from the American Society for Information Science ... James LINCOLN, Theda SKOCPOL & Michael BURAWOY appointed Associate Eds. of the American Sociological Review ... Barry WELLMAN appointed to Board of Advisors of the Journal of Social & Personal Relationships ... James COLEMAN a Visiting Scholarship by the Russell Sage Foundation to analyze the structure of social action, actors and resources in the social system, and the emerging organization of modern societies ... Samuel Ross COHN awarded a postdoctoral Fellowship by Russel Sage to study the feminization of clerical labor and industrial shifts in Great Britain ... Louise TILLY & Chris WINSHIP to give thematic sessions at 1983 American Sociological Association meetings (troit, 9/83) ... Clifford BROMAN (Michigan) awarded Spivack Dissertation Fellowship to study "Social networks, social support and seeking professional help for problems" ... Tri VAN NGUYEN (Wisconsin) awarded same Fellowship to study "Stress of Uprooting, Coping and Adaptational Outcomes: A Prospective Study of Vietnamese Refugees" ... Barbara LASLETT on American Sociological Assoc.'s Committee on Nominations ... Leonard PEARLIN and Nancy BRANDON TUMA on ASA's Committee on Publications ... Janet ABU-LUGHOD on ASA's Distinguished Scholarship Award Committee....

...Nicholas MULLINS & Peggy THOITS on ASA's Committee on Regulation of Research ...Sylvia FAVA Chair of ASA's Committee on Trends in the Occupation of Sociologist ... Harrison WHITE ASA's Official Rep. to the AAAS ... Immanuel WALLERSTEIN a Director of the (US) Social Science Research Council ... Edna BONACICH Chair of ASA's Marxist Sociology Section.

TILLY GETS WHAT HE DESERVES:

Founding INSNA Advisory Board Member Charles TILLY won a 1982 Common Wealth Award for "distinguished service: and "outstanding achievement". The award comes with a check for \$14,000, plus a super hi-tech stainless steel trophy.

At the awards ceremony at the American Sociology Association annual meeting, Theda Skocpol summarized some of Tilly's accomplishments:

Skocpol described Tilly as a "collective resource for the various networks of social scientists who share in his many scholarly concerns. Over an extraordinarily productive career as a scholar, teacher and organizer of professional life, Tilly has made major contributions to political sociology, to economic and demographic history and -- above all -- to intellectual and methodological cross-fertilization between social history and macrohistorical sociology." This traces back to Tilly's Harvard thesis (later revised into THE VENDEE), "a careful study of the social sources of rural support for the counterrevolutionary revolts of the French Revolution."

Skocpol noted that FROM MOBILIZATION TO REVOLUTION is a major work presenting a theoretical model for understanding collective action. Here, he counters theories ascribing political violence to individual frustrations and social dislocations and explains it instead in terms of "otherwise routine political contentions among governments and groups jostling for advantageous access to the polity."

The network/structuralist underpinnings of all this are obvious. But I suspect that many network folks don't know that Tilly has been enormously in community network studies as well: directly inspiring Wellman's East York work, writing an influential paper (later partially published in the Introduction to his AN URBAN WORLD, and having an advisory hand in many other works.

IS THE MAFIA A NETWORK?

"There is no such thing as organized crime, just a lot of guys trying to make a buck" ... attributed to the late Meyer Lansky.

NEWS BRIEFS

The INTERNATIONAL SOCIOLOGICAL ASSOCIATION has moved its Secretariat to Oude Hoogstraat 24, 1012 CE Amsterdam, The Netherlands. Tel: (20) 525-3584 or 3589. Scott Feld has volunteered to take the lead in organizing network sessions for the next ISA World Congress in 1986.

Social scientists who are doing/have done SCOTTISH RESEARCH are being solicited for listing in a new directory. Those wishing to be included and receive the eventual Directory should send a bibliography of published and unpublished works (indicating geographical area of Scotland) to Ed Knipe, Soc Anthro, Virginia Commonwealth U, Richmond VA 23284.

Michael Loukinen (Soc, Northern Michigan) has produced and directed a film on FINNISH AMERICAN LIVES for course use.

UCLA Soc is giving our 2-year NIMH-funded postdocs in MENTAL HEALTH EVALUATION RESEARCH. Stipends begin at \$13,380. Contact Oscar Grusky.

The NIMH itself says it is giving out more social science research \$ than earlier Reaganesque rumours had had it: up to \$700K in fiscal '83. Activities to be supported must be of critical importance to state decision makers, and/or federal policy makers with responsibility for planning organizing, managing, and financing service systems for chronically mentally ill persons. (i.e., you need to learn a new set of jargon for successful proposals).

The NATIONAL CENTER FOR HEALTH SERVICES RESEARCH will give grant support for Ph.D. dissertation research in the social, medical, management sciences on the organization, delivery, financing or quality of health care services. Contact NCHSR, Room 7-50A, Center Bldg., 3700 East-West Highway, Hyattsville MD 20783.

Soc, INDIANA U gives NINH-postdocs on "Identity, Self Role and Mental Health" to Ph.Ds from soc, psych, social work, ed., etc. Contact Sheldon Stryker, Bloomington IN 47405.

SUNY Press is starting a book series on INTERNATIONAL POLITICAL ECONOMY & DEVELOPMENT -- especially the place and prospects of the Third World. They say they want to get out of current stylized and sterile debates by (1) redefining the very terms in which such traditional fields as trade, aid, international capital flows, industrialization, rural development, and state policy have been studied; (2) contributing significantly to topics such as women as active subjects of the Third World social formation, the use of comparative history for development of studies, the possibility of a Third World social formation with particular emphasis on the state, technology, social relations, and productivity in rural and urban settings. Contact Editors: Rosemary Galli, Pol Sci, U of Calabar, P.M.B. 115, Calabar, Nigeria; Frederick Weaver, Dean of Social Sciences, Hampshire Col., Amherst MA 01002.

NEW JOURNALS

The JOURNAL OF SOCIAL AND PERSONAL RELATIONSHIPS is a new journal founded by a solid and larger group of psychological researchers mainly concerned with dyadic interpersonal interaction, but with a growing interest in social network analysis. Steve Duck is the Editor (Psych, Fylde College, U of Lancaster, Bailrigg, Lancaster LA1 4YF; tel: 0524-65201x4519). Barry Wellman is the Sociology cum network analysis Advisory Board member; others will come from Clinical Psychology, Communications, Developmental Psych and Social Psych. The journal will be published by Sage, starting in 1984.

POLITICAL GEOGRAPHY QUARTERLY will publish in 3 major themes: (1) continuing research on 'traditional' topics such as geostrategic regions and the spatial structure of states; (2) quantitative, positivist studies such as in electoral geography and policy impact research; (3) political economy approaches dealing with issues such as those arising from alternative theories of the state of the world-economy perspective. Ms. to Peter Taylor (Geog, Newcastle U, NEL 7RU) or John O'Loughlin (Geog, U of Illinois, Urbana IL 61801). Subs (£ 20) to MAGSUB, Oakfield House, Perrymount Road, Haywards Heath, West Sussex RH16 3DH, England.

COMPUTATIONAL STATISTICS & DATA ANALYSIS is a new quarterly for the rapid dissemination of new research material in computational statistics. The first part of the journal will be for new methods; e.g., generating random variables, density estimation, computational algorithms, statistical methods in simulation. The second part will be for applications and case studies: benchmark problems for statistical software, comparing statistical packages, analysis strategies, graphical presentation problems. The third part will be a review section describing new developments in statistical software, interactive analysers, CAI packages, teaching aids. Ms. to Stanley Azen, Dept. of Family & Preventive Medicine, School of Medicine, Univ of Southern California, Los Angeles CA 90033. Subs. Dfl.220 (US\$88) from North-Holland, Box 211, NL-1000 AE Amsterdam, The Netherlands.

EUROPEAN POLITICAL DATA NEWSLETTER is a quarterly newsletter published by the ECPR. Like CONNECTIONS, it gives news of data organizations, archives, book news, comparative cross-cultural inventories of similar research, meetings news software news. Info from Norwegian Social Science Data Services, Hans Holmboesgate 22, N-5014 Bergen-Univ., Norway.

RESET: NOTES ON ALTERNATE INFORMATICS is an informal newsletter about computer and telecommunication grassroots activities, with discussion of social uses of the technology. A recent issue included a description of the Apple Co. Grants Program, a description of a group called "Informatics for the 3d World", and news about a Sri Lanka microcomputer club. Info. from Mike McCullough, 90 E 7th St., Apt. 3A, New York, NY 10009. (Source: RAIN).

COMMUNITY JOBS is a monthly listing of job openings for those seeking employment or internships with US socially responsible nonprofit organizations. Also highlights social changes issues, and briefs upcoming events, new publications and resources. Subs: \$12 from Community Careers Resource Ctr., 1520 16th St., NW, Washington DC 20036. (Source: RAIN).

RAIN publishes information which can help people lead more simple and satisfying lives, make their communities and regions more economically self-reliant, and build a society that is durable, just and ecologically sound. Their new editorial staff seems to prefer "Whole-Earth Catalog" type "access" articles. A good tool for CONNECTIONS. \$15 from Rain Umbrella, 2270 NW Irving, Portland, OR 97210.

FRENCH-LANGUAGE PSYCHOLOGY is an English-language journal which reviews, abstracts or mentions all psychology books and articles published in French. Subs: \$38 from Elsevier Science Publishing, 52 Vanderbilt Ave., New York, NY 10017.

SPANISH-LANGUAGE PSYCHOLOGY does the same thing for you know what. Subs: \$40 from the same place.

HUMAN COMMUNICATION RESEARCH is a quarterly studying human symbolic interaction. Recent articles include "On the ephemeral nature of the relationship between attitude similarity and interpersonal attraction during initial encounters" and "Analyzing negotiation tactics: development of a negotiation interact system." Ms. to Mark Knapp (SUNY-New Paltz). Subs. (\$18) to Dept. 2000, Transaction Periodicals, Rutgers Univ., New Brunswick, NJ 08903.

(NETWORK NOTEBOOK continued on page 14)

MEETING CALENDAR

ASSOCIATION FOR HUMANISTIC PSYCHOLOGY--23-27 JUNE 83, TORONTO

The annual meeting's theme is "Conscious networking for individual and social change". Jessica Lipnack and Jeffrey Stamps are the thematic organizers. Info from AHP, 325 9th St., San Francisco, CA 94103 (415-626-2374). Local info from Connie Croll-Young, 14 Strathearn Rd., Toronto, Canada M6C 1R7 (416-656-0991).

ARBEITSTAGUNG ZUR VERGLEICHENDEN, QUANTITATIVEN UNTERNEHMENSGESCHICHTE

(MÜNSTER, JUNI 83)

Zum Thema: Zu den Gemeinplätzen der Wirtschaftsgeschichte gehört die Feststellung, daß Unternehmer und ihre Unternehmen Hauptakteure und tragende Kraft der modernen Wirtschaft gewesen seien. Uneinigkeit besteht allerdings unter Historikern über die mit diesen Akteuren verbundenen Erkenntnismöglichkeiten und über den besten Weg, sie auszuschöpfen. Die geplante Tagung zur Unternehmensgeschichte möchte das Instrument des quantifizierenden Vergleichs in den Mittelpunkt stellen, weil dieses Instrument das Untersuchungsfeld und somit die Erkenntnischancen sachlich möglicherweise einengt, aber dennoch Ergebnisse produzieren kann, die relativ präzise und nachvollziehbar sind, Ergebnisse, die also besser geeignet sind, als Bausteine für die weitere Forschung zu dienen als zahlreiche bisherige Beiträge zur Unternehmensgeschichte. Angesprochen werden sollen mit diesem Aufruf alle Personen, die mit unternehmenshistorischen Quellen arbeiten, und dabei entweder explizite quantifizierende Vergleiche - z.B. zwischen Unternehmen, zwischen Unternehmensgruppen verschiedener Sektoren oder zwischen Unternehmen bzw. Unternehmensgruppen verschiedener Länder - erstellen können, oder deren Beiträge durch ihre quantitative Ausrichtung sich für den Vergleich mit anderen Studien gut eignen. Selbstverständlich sollen diese Arbeiten Hypothesen enthalten, und nicht bloß Beschreibung mit Zahlen - Measurement without theory - betreiben. Soweit sie o.a. quantitative - vergleichende Kriterien erfüllen, sind Arbeiten aus allen Bereichen der Unternehmensgeschichte willkommen - vom Gebiet der Technikgeschichte über Finanzierungsprobleme bis hin zur politischen Tätigkeit organisierter Unternehmer. Als chronologisch-historische Grenzen sollen das 19. und 20. Jht. gesehen werden.

Es ist geplant, die Beiträge der Tagung als Sammelband zu veröffentlichen. Interessenten werden gebeten, eine Beschreibung ihrer geplanten Beiträge an R. Tilly, Institut für Wirtschafts- und Sozialgeschichte Magdalenenstraße 1, 440 Münster, West Germany.

SOZIALE PROBLEME UND GESELLSCHAFTLICHER WANDEL IM 19. JAHRHUNDERT

Die Sektion "Soziale Probleme und soziale Kontrolle" (in der Deutschen Gesellschaft für Soziologie) veranstaltet Ende September/Anfang Oktober 83 eine Tagung. Folgende Themen sind vorgesehen:

--Ergebnisse historischer Forschungen über soziale Probleme, gesellschaftliche Reaktionen und soziale Kontrolle (Armut, Kriminalität, Prostitution, Polizei, Wohlfahrtsentwicklung, Strafgesetzgebung, etc.)

--Historische Forschungen und Theorien über soziale Probleme

--Methodische Fragen der Analyse von Daten über soziale Probleme des 19. Jahrhunderts.

Info from Herbert Reinke, Zentrum für historische Sozialforschung, Universitätsstrasse 20, D-5000 Köln 41, West Germany (0221/441087) oder Karl-Heinz Beuband, Zentralarchiv für empirische Sozialforschung, Bachemer Strasse 40, D-5000 Köln 41, West Germany (0221/4703155).

CANADIAN SOCIOLOGY & ANTHROPOLOGY ASSOCIATION, 1-4 JUNE 83, UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER:
SELECTED SESSIONS & PAPERS

June 1

"Community power structure: locals and cosmopolitans in Simcoe, Ontario." Karen March, Soc., McMaster.

"Agrarian reform & changing rural-urban relations in coastal Ecuador: Vines", Lynne Phillips, Anthro, Toronto.

"Occupational health & safety: class conflict & the role of medicine", Vivienne Walters, Soc, McMaster.

"Women at work: untangling theoretical assumptions about Cdn. families", Meg Luxton, Soc, McMaster.

"Control of crown corporations: a case study", June Corman, Soc, Toronto.

"Pain & physical disability: an examination of perceptual & functional indicators of a deviant role", Gail Frankel & Sandy Nuttall, Health Care Research Unit, Western Ontario.

"Capital accumulation, fiscal crisis & the neocolonial state: from democracy to dictatorship in Newfoundland, 1920-34", Barbara Neis, Soc, Toronto.

June 2

"Household structure & economy of Newfoundland's 3 outports", Marian Binkley, Soc & Soc Anthro, Dalhousie.

"Marital dissolution: are the consequences always negative?" Darla Rhyne, Behavioral Research, York.

"The social organization of biomedical research: specialties, laboratories & research teams", Ross Baker, Alberta.

"A blockmodel analysis of another research specialty: clinical reasoning", Linda Muzzin, Health Sciences, McMaster.

"The individual, class & corporate power in Canada", William Carroll, Soc, Victoria.

"Class, culture & morality: the new right & the remoralising of capitalism", Brian Elliott, Soc, Edinburgh.

"Broken-up Canada & breaking-up Britain: some comparative lessons in uneven development, nationalism & regionalism", R. James Sacouman, Soc, Acadia.

"Politics & uneven capitalist development: the Maritime challenge to the study of Canadian political economy", Michael Clow, York.

"St. John's merchants on confederation's eve: a political & economic assessment", Lawrence Felt, Soc, Memorial, Newfoundland.

"Psychiatric treatment in 19th century Canada", Barry Edginton, Soc, Winnipeg.

"Migrant labour systems as reproducers of labour power: some historical evidence", Robert Russell, Soc, Lakehead, Thunder Bay, Ontario.

"Migrant workers & labour market segmentation", B. Singh Bolaria, Soc, Saskatchewan.

"Demography, kinship & social relations of production: the case of the 17 century Juron", Karen Anderson, Soc, Toronto.

June 3

"Ethnic community according to Harold Innis' theory of space-binding communication", A. Fathi, Soc, Calgary.

Session on Social Support, Social Networks & Health Outcomes

"Asthma & social support", Carole Miles-Tapping, Soc, Carleton

"The relationship between social support & psychological distress: direct, protective & compensatory effects", John Syrotuik & Carl D'Arcy, Applied Research Unit, Univ. Hospital, Saskatoon.

"Stress, social support & adaptation to chronic kidney failure", Howard Burton, Paul Heidenheim, R. Lindsay, Nursing, Western Ontario.

Session on Les Multinationales Canadiennes et l'Etat

"The multinationalization of Canadian agribusiness", Philip Ehrensaft, Soc, UQAM.

"Unity or corporate & state elites?" John Fox & Michael Orenstein, Soc, York.

"La multinationalisation des banques canadiennes", François Moreau, Soc, UQAM.

"Social consequences of a plant closure: the experience of displaced appliances workers", Robert Hiscott, Soc, Toronto.

Session on Social Networks

"Links to helping behaviour", Bonnie Erickson & Alexandra Radkewcz, Soc, Toronto.

"A test of Goode's theory of prestige allocation", Bonnie Erickson, Soc, Toronto.

"Sex, class and networks", Barry Wellman, Soc, Toronto.

"The selling of the commoditized household", Bonnie Fox, Soc, King's, London, Ontario.

"New directions in development theory as applied to research in Tanzania", Charles David Smith, College Branson, Montreal.

"Chinatowns in Canada: theorizing about the enclave economy", Peter Li, Soc, Saskatoon.

"Networks & jobs: gender differences", Liviana Mostacci Calzavara, Soc, Toronto.

"Impact of labour force discontinuity on female occupational attainment", Monica Boyd, Soc, Carleton.

June 4

"Computerization & managerial control in large offices", Andrew Clement, Computer Sci, Toronto.

"Performance & conceptual art: reviving the celebration of the aesthetic dimension in everyday life", Janis Runge, Banff School of Fine Arts.

"Regional agrarian structures & underdevelopment", Anthony Winson, Gorse Brook Res. Inst. for Atlantic Canada Studies.

"More networks of faith: the divine light mission in Victoria, BC", Zane Shannon & CD Gartvell, Victoria.

QUESTIONING THE WELFARE STATE, & THE RISE OF THE CITY (PARIS-NANTERRE, 10-12 OCT 83)

The three themes are Participation & social movements: Decentralization; Austerity & innovation. Abstracts due right away. Info from Dan Ferrand-Bechmann, Universite II de Grenoble, I.A.E.S., B.P. 47X, 38040 Grenoble Cedex, France (tel: 76-42.57.27). North American info from Terry Clark, Soc, U of Chicago, Chicago, IL 60637 (tel: 312-962-8686).

SOCIAL SCIENCE HISTORY ASSOCIATION, 27-30 OCT 83 (SHOREHAM HOTEL, WASHINGTON)

Those wishing to present a paper, etc. contact immediately Olivier Zunz, History, Randall Hall, U of Virginia, Charlottesville 22903 (803-924-7146).

CONFERENCE ON THE HUMAN-ANIMAL BOND, 13-14 JUNE 83 (U of MINN), 17-18 JUNE (CAL-IRVINE)

Papers invited immediately to report research on animal-human relationships (1) as they affect health and quality of life for the handicapped and those in longterm care facilities; (2) as they affect mental and physical health across the life span of humans; (3) as they may affect other concerns of society such as family violence. Contact R.K. Anderson, Ctr to Study Human-Animal Relationships, 1-117 Health Sciences Unit A, U of Minnesota, Minneapolis MN 55455 or Wm. Winchester, Continuing Veterinary Medical Education, College of Medicine, U of California, Irvine 92717.

PAST MEETINGS

American Orthopsychiatric Association, 4-8 April 1983. Boston (Park Plaza) - Selected Sessions

Structural family therapy (Charles Fishman, Jay Lappin).

Social network intervention in clinical practice (David Trimble, Carolyn Attneave, Jodie Kliman, Paul Schoenfeld, Joan Speck, Ross Speck).

Dancing in chains: Delivery of health care in the inner city (Mindy Thompson, Chrystal Fourcard, Laille Gabinet, Hector Goa, Olga Pacheco, Myrtle Parnell, Luciano Rodriguez, Marisa Velez).

Women's resource centers as community health & mental health centers in the face of shrinking public support (Malkah Notman, Elaine Borins, Deborah Linell, Jean Baker Miller, Fern Small).

The use of structural & strategic family therapy techniques in group psychotherapy with adolescents (SuAnne Lawrence, Susan Regas).

The use of multiple family groups to cope with chronicity (Deborah Richman, Karen Carlson, Thomas Johnson, John Woods).

The schizophrenia of community mental health (Lester Gelb, Jaime Inclan, Samuel Grob).

SUNBELT SOCIAL NETWORK CONFERENCE, SAN DIEGO, 11-13 FEB 83

"Purposive action embedded in social networks", James Coleman, Russell Sage Foundation.

"On the nature of influence in large systems", Edward Laumann & David Knoke, Indiana.

"Experiments in exchange networks", Karen Cook.

"Tertius Gaudens, structural entrepreneur", Ron Burt, Soc, Columbia.

"Rethinking backcloth and traffic", Steven Seidman, Math, George Mason.

"Q-analysis of food webs", Patrick Doreian.

"Overlap structure of ceremonial events in two Thai villages", Brian Foster & Steven Seidman.

"Changing structure: backcloth and traffic", Linton Freeman, Soc Sci, Cal-Irvine.

"Interlocking directorates and communities of interest among American railroad companies, 1886-1905", Philip Bonacich, UCLA & William Roy.

"Using the STRUCTURE algorithm for practical applications", David Knoke, Soc, Indiana.

"Application of regular equivalence algorithms (REGGIE) in work organizations", David Krackhardt, Business and Cornell.

"Using GALLILEO in practical applications", Joseph Woelfel, Comm, SUNY-Albany.

"Using the CATIJ algorithm in understanding the structure of communication", Thomas Hurt, Department of Speech Comm., North Texas State.

"Using NEGOPY in practical applications", Ron Rice, Annenberg School of Communications, Southern Cal.

"Markets and market bargaining", Steve Berkowitz, Soc, Vermont.

"Firms, directors and time: the directorate tie market", Ron Burt, Soc, Columbia.

"Class and status effects on local interlocks and corporate philanthropy", Joseph Galaskiewicz, Soc, Minnesota.

"Some statistical problems in analysis of social networks", Christopher Achen, Ctr for Adv. St. in Beh. Sciences, Palo Alto & Henry Brady, Public Policy School, Cal-Berkeley.

"Practical 'networking' and network theory", Charles Kadushin, Soc, CUNY Grad. Schl.

"A suggested modification to Burt's use of Euclidean distances in structural equivalence", A. Kimball Romney & Katherine Faust, Math Soc Sci., Cal-Irvine.

"Detecting similar social structure from in- and out-degree: an analysis of friendship selections and activities", Timlynn Babitsky, Math Soc Sci., Cal-Irvine.

"Predicting informant accuracy from patterns of recall", A. Kimball Romney & Susan Weller, Cal-Irvine.

"Exact triad models for the Davis-leinhardt empirical sociomatrices", Eugene Johnson, Math, Cal-Santa Barbara.

"The network concept in historical research: problems and prospects", Andrejs Plakans, History, Iowa State.

"Effects of network structure on buyer behavior: a preliminary study", Jacqueline Johnson, Brian Foster, Peter Reingen, Arizona State & Steven Seidman, Math, George Mason.

"Urban planning, social networks, and energy conservation", Allan Klovdahl, Soc, ANU.

"Heroin addicts' income sources: social and macro-structural approaches", Bob Saltz, Pacific Institute for Research and Evaluation, Berkeley, CA 94710.

"Exchange dependency of heroin addicts: mothers versus others", Ann Irschick, Pacific Institute for Research and Evaluation.

"Pre- and post-intervention: social network intervention with the elderly", Nancy Chapman, Urban Affairs, Portland State.

"Social mapping techniques: a preliminary guide for locating and linking to natural networks", Ramon Valle, San Diego State.

"Groups, leadership and social boundaries: an application of a spatial model to the analysis of a multiple network system", Rumi Kato Price, Sociology, Cal-Berkeley.

"Study of a closed social system: toward an understanding of group dimensionality", Jeff Johnson, Inter-coastal Marine Resources, East Carolina & Marc Miller Institute for Marine Studies U of Washington.

"The contribution of social networks to psychosocial adaptation of continuous ambulatory peritoneal dialysis patients", Carl Maida, UCLA School of Medicine, Dialysis Program, CA 90024.

"Social networks and wellbeing", Michael Miner, Pacific Institute for Res. & Eval.

"The constituent elements of support in social networks", Ramon Valle, Social Work, San Diego State.

"Implications of social networks for social policy: some British findings", Paul Parker, Regional Research Institute, Portland State.

"Network and migration", Davor Jedlicka, Social Science, Texas-Tyler, Tyler, TX 75701.

"Demographic change and the composition of women's networks", Janet Bauer, Carolina Population Center, North Carolina.

"Social distance and deadly quarrels", A. Ron Gillis, Sociology, Toronto.

"The transition from youth to adult: understanding the age pattern of employment", Robert D. Mare, Sociology, Wisconsin & Christopher Winship, Sociology, Northwestern & Warren Kubitschek, Sociology, Wisconsin.

"From algebra to geometry in networks", John Boyd, Math Soc Sci., Cal-Irvine.

"Basic measurement theory in social network analysis", William Batchelder, Cal-Irvine.

"Discovering informant and observer bias in interpersonal relations data", James Armstrong, SUNY-Plattsburg.

"Robustness in blockmodeling: an empirical test", Peter Carrington & Bonnie Erickson, Soc, Toronto.

"Measurement validity of network algorithms: illustrations from critique of CONCOR", Francis Sim, Penn. State.

"Social groups: CLSTR and HIERCY clique algorithms", Karl Reitz, Math, Chapman College.

"EBLOC: a cycle-clique algorithm", Martin Everett, Thams Polytechnic, London.

"Measuring robustness of cliqueing and blocking algorithms under line deletion", Martin K. Everett, Douglas White and Karl Reitz.

"Robustness of algorithms under point deletion", Hugh Kawabata, Soc, Cal-Santa Barbara 93106.

"Gender, marital change, confidant, and depression", Nan Lin, Mary Woelfel & Mary Dumin, Soc, SUNY-Albany.

"Social support theory and its implications for social networks", Richard Thomas, Soc, Memphis State.

"The status-buffering role of source of support among urban married", Baqar Husaini, Mental Health Projects, Tennessee State.

"Utility of natural help relationships", Ron Evans, Social Work Service, Medical Center, Veterans Administration, 4435 Beacon Ave. So., Seattle, WASH 98108.

"Access to different kinds of help in a voluntary association", Bonnie Erickson, Soc, Toronto.

"Galton's problem as network autocorrelation", Malcolm Dow, Northwestern.

CENTRE FOR URBAN AND COMMUNITY STUDIES, 11 MARCH 83, UNIVERSITY OF TORONTO, SOCIAL NETWORKS IN THE CITY

"Community as network", Barry Wellman.

"What happens when social relationships don't meet needs: the Jane-Finch study", Susan Hodgson.

"Social networks and recreational activities of young adolescents in low income housing", Howard Andrews & Michael Ennamorato.

"Social networks and access to jobs", Liviana Calzavara.

"Do networks pay off?" Bonnie Erickson.

All participants are members of the Centre for Urban and Community Studies.

(NETWORK NOTEBOOK continued from page 8)

And for those who'd rather move than speak, there's HUMAN MOVEMENT SCIENCE, "a journal devoted to pure and applied research on human movement." Ms. to H.T.A. Whiting (Amsterdam). Subs. \$30 from Elsevier.

CANADIAN JOURNAL ON AGING/LA REVUE CANADIENNE DU VIEILLESSEMENT is a new quarterly publishing ms. bearing on aging from biological, health science, psychological, social science and social welfare concerns. Ms. (Sub. \$25) to Blossom Wigdor, Gerontology Programme, Univ of Toronto, 455 Spadina Ave., Toronto, Canada M5S 1A1.

CANADIAN JOURNAL OF NATIVE STUDIES aims at academics and practitioners in the area of North American Indian and northern Arctic affairs. Subs \$16 from CJNS, 1229 Lorne Ave., Brandon, Manitoba, Canada R7A 0V3.

The ESPER JOURNAL will concentrate on human behaviour influences, response, values, cost/benefits as they relate to energy/environment policies, actions and changes. Each issue will be thematic, containing papers, give-&-take, news items, literature abstracts and citations. The first two issues will look at "clean air" and "environmental technologies. Info from Joe Miller, Yale School of Forestry & Environmental Studies, 205 Prospect St., New Haven CT 06511.

AUSTRALIAN-CANADIAN STUDIES is a new interdisciplinary annual. Contents will include cross-national research between these two countries, research focused on one country with implications for the other, policy reviews in the areas of economic development, foreign investment, regionalism and public policy. Subs. (\$5) and info from Gordon Ternowetsky, Sociology Dept., La Trobe Univ., Bundoora 3083, Victoria, Australia.

(NETWORK NOTEBOOK continued on page 55)

MODELLING: FOR REAL OR FOR FUN?*

J. A. Barnes, Churchill college, Cambridge CB3 0DS, Great Britain

ABSTRACT. Models are reconstructions of nature. Their extrovert potentiality is the light they may throw on the real world, while their introvert attraction lies in exploring and transforming them without reference to the real world. Fashions in model construction and use oscillate between the extrovert and introvert poles. Because models in network analysis are basically scientific, the movement of fashion is not entirely repetitive but has a forward cumulative component as well.

Although the literature on models in science is vast, many social scientists query its relevance. Some of us, myself included, are sufficiently old-fashioned to think that the real world should remain the main focus of scholarly attention in social science. The philosophy of the social sciences, of which these discussions of models form an important part, seems to add very little directly to our understanding of that real world. If so much has been said already, and to such little use, why then add to the jungle of words?

Yet two features of this literature may justify a modest attempt to add to it. First, there is little evidence that network analysts spend much time browsing through this literature. It doesn't get cited in Social Networks and Connections. The word 'hermeneutics' never appears there, nor do the authors of these articles speculate independently on the subtle issues that dominate the discussions of the philosophers of science and others who write professionally about models. By and large network analysts press on regardless. They produce a profusion of models, uninhibited by any doubts about how these might fit into some typology and unconcerned about the ontological and epistemological status of the connection between the world and the model. Indeed, there is a striking and refreshing contrast between the essays that I read continually in Cambridge and the corpus of network analysis. In our student essays the words epistemology and ontology luxuriate, largely at the expense of any data from the real world, whereas in the writings of network analysts these words are rare birds indeed.

The second relevant feature of the literature on modelling in social science is that it is almost completely classificatory, morphological and normative, and not at all sociological, even when written by card-carrying sociologists. There are learned and fascinating discussions on topics such as the difference between models and paradigms (Hesse 1976), between emic and etic models (Pike 1967), and between analogue, iconic and symbolic models (Miller 1967). There are also historical accounts of how the key model in scientific thought has, through the centuries, shifted from society to the wheel, the balance, clockwork, the organism and so on (Deutsch 1951). But there is almost nothing on what we might call the sociology of modelling in the social sciences, at least not at close range. Kuhn's well-known Structure of scientific revolutions (1962), with its later modifications, and competing proposals from Popper, Lakatos, Feyerabend and others, provide large-scale accounts of how in natural science one constellation of concepts, axioms and propositions gives way to another. But these accounts cannot easily be modified to allow for the intrinsic differences between the natural and the social sciences (cf. Putnam 1978:55-65). Furthermore, their attention is directed at paradigm shifts, the major changes in scientific thinking, rather than at the waves of intellectual fashion that animate the scene between one major change and the next, during periods of so-called routine science. Certainly no-one so far seems to have looked at network analysis from this point of view. Yet the sub-title of Sam Leinhardt's collection of articles, Social networks: a developing paradigm, invites a sociological scrutiny of how routine social science, using the network paradigm or model, does actually develop.

But as Harary and I have pointed out recently (Barnes and Harary n.d.), there are good structural reasons why network analysis, unlike graph theory, has not yet acquired an orthodox pedigree. I doubt if it ever will. All I want to do here is to throw into the ring some ideas about how modelling develops within a given intellectual and academic context, and to suggest how a knowledge of this development might affect future praxis. In other words I propose to offer a meta-model, a model of the modelling process. In doing so, I am reminded of the sentence with which Barry Wellman ends his excellent guide to network analysis: 'the capacity of network analysis to pose questions would profit from an enhanced capacity to provide answers' (1982). The same cri de coeur can be made with meta-modelling.

We can begin with the observation that everyone seems to be in favour of models. As May Brodbeck says: 'Models are Good Things'. Then she goes on to say, more questionably, 'And if models are good, "mathematical models", needless to say, are even better' (1959:373). But she questions this latter statement herself so severely that she says we should abandon the term 'mathematical model' completely. What we have to ask is this: if models, mathematical or otherwise, are good, what are they good for?

* I am much indebted to Geoffrey Hawthorn for suggestions used in this paper. A slightly longer version was presented at the second annual Sunbelt network conference held at Tampa, Florida on 12 February 1982.

This question leads us at once into the treacherous field of definitions. There are dozens of definitions, and there is no point in adding to the roster. The best one for our present purpose is that given by Levins, a biologist, who says simply that a model is 'a reconstruction of nature for the purpose of study' (1968:6). The main point of my thesis in this paper hinges on the word 'study' in Levins' definition. What are we studying when we use a model?

Levins himself is quite definite about what he means. He refers to the study of nature. Nature is reconstructed and simplified in a model so that nature can be studied more effectively. But his definition can also be read in another way. The 'study' in question can be the study of the model rather than of the nature from which it has been derived. For as an intellectual object the model has two attractions for us, and they compete with one another. Let's call them the extrovert and the introvert potentialities of the model. On the one hand we can use models to increase our understanding of the real world; on the other we can manipulate and transform them so that they tell us more about themselves. The latter point is well stated by Lave and March, in their remarkably didactic textbook, *An introduction to models*. They say 'Much of the power, beauty, and pleasure of models comes from inventing and elaborating them' and that 'playing with ideas is fun' (1975:vii, 3). Power, beauty, pleasure and fun: these are attractive qualities, but in general they stand in sharp contrast to those of understanding, knowledge, wisdom and utility which we would expect to spring from a study of the real world. I am reminded of Einstein's remark that 'the most incomprehensible thing about the world is that it is comprehensible' (Frank 1950:118) and would place that alongside another comment of Lave and March: 'God has chosen to give the easy problems to the physicists' (1975:2). If the world that Einstein had in mind includes the social world, and if this is truly difficult but comprehensible, then its study, whether by means of models or by any other means, is necessarily an austere and arduous task. It is therefore not surprising if those who should be struggling with that task are sometimes diverted from it by the pleasure and fun offered by the study of models. On the other hand, given the chronically sorry state of the real world, there is continual pressure - political, financial, moral, and intellectual too - for social scientists to turn their attention outward from the ivory tower, to leave the introverted fun of manipulating models and turn to the extroverted task of manipulating real data, or even the real world itself.

In other words, there seems to be a dialectical relation between problems posed by the real world, whether these are generated by social causes or by intellectual curiosity, and the content of the intellectual armoury we collect and elaborate within the ivory tower (cf. Dahrendorf 1968:256-278). As with armouries of other kinds, the weapons we construct are not necessarily intended for any specified target, or indeed for any target at all. Both terms in the relation have their internal dynamic. The real world continually generates new problems without much regard to our ability to solve them, while in the ivory tower the model-makers and other builders of analytic tools beaver away, largely absorbed in their own scholastic debates. Yet the relation between the real world and activity within the ivory tower persists, and is dialectic or two-directional. Each term impinges on the other. To some extent our perception of problems in the real world is influenced by our ideas about what aspects of the world are changeable, at least in principle, and what are immutable. Likewise the development and elaboration of intellectual weapons is not entirely an autonomous enterprise but responds in part to pressures from outside.

There is thus an oscillation of attention by social scientists, including network analysts. Sometimes the emphasis is on the real world and its troubles. We have to provide solutions, either practical or intellectual, to problems we have not chosen, making the best use we can of existing analytic tools. At other times attention is directed more towards elaborating the armoury, without bothering too much about whether the weapons might, or even could, ever be used, in anger or in earnest, on real world problems. This pleasurable activity, however, eventually attracts the critical attention of colleagues who are frustrated by their inability to understand what the model-makers are doing, or who see support for the pursuit of their own extroverted interests threatened by this flagrant introspective scholasticism. Thus we have for example a complaint directed specifically at the work of some of us here today:

. . . a considerable number of them are almost completely involved in technical problems. They are busy refining existing concepts and enlarging the arsenal; they try to make elaborate classifications, and they attempt to inject network analysis with mathematical concepts and procedures in order to give it a more 'scientific' tone. Evidently for these network 'technicians' . . . there is not much time for realizing that network analysis is meant to solve anthropological problems (Bax 1977:3).

Price (1981:304) makes a more pertinent criticism when she complains that 'Assumptions about the social rules and resources employed in the production and reproduction of social patterns are seldom explicitly discussed in sociological network studies. . . . many network studies . . . take as their point of departure a view of culture as a coherent system of symbols and meanings. Apparently, a passive, adaptive, receptive view of human agency predominates. . . . Esoteric network analysis can be profoundly misleading when transposed into applied research agendas without specification of the assumptions on which such work is founded'.

A well-aimed methodological criticism is made by Piddington in an article about irregular marriages made by Australian Aborigines. Australian Aborigines, as I am sure you know, have themselves produced models of such elegance that Lévi-Strauss (1956:143) was moved to credit them with the invention of

sociology. Yet they have suffered more than most ethnic groups from mis-modelling imposed on them by outside observers. Piddington (1970:341-342) writes that the construction of foreign models 'leads to endless discussions about hypostatized symbolic systems. Though these may provide an entertaining diversion for frustrated mathematicians they have the fatal weakness that they do not lead back to the operations which alone could test their validity. This last requirement is an essential characteristic of a valid scientific theory'.

In response to this kind of criticism, and to pressures from the real world, there is thus an irregular temporal alternation between one emphasis and the other. Not all social scientists move in synchrony, and there are plenty of reverse eddies. Nevertheless there are also discernible tides, at least on a continental scale. In periods of fervent analytic inventiveness the real world is neglected while new techniques are developed, often as ends in themselves. Some of these techniques are later found to have practical applications, but membership of this sub-set cannot be predicted in advance. At the other end of the pendulum's swing, in periods of coping pragmatically with urgent practical issues, existing techniques are mobilized and employed with positive effects; the world gets changed as the result of applied social research, and changed for the better, at least from some points of view and in the short run. But unforeseen consequences, and new practical problems, soon upset the applecart of social engineering. The pundits begin to call for better analytic tools, and the pendulum starts to swing back again. In the intervening periods, between tides at slack water, when political pressures for immediate answers to social problems are moderated, there is sufficient leeway for a fruitful link between empirical research and intellectual innovation. It is then possible to hoist the famous banner of the Tavistock Institute: 'No research without therapy, no therapy without research'.

Thus the relation between model building and the real world can best be seen as oscillatory or cyclical, rather than as stable and static. Maybe this oscillation would be sustained by social processes even if the models we build fitted the data from the real world rather more closely than they actually do. In fact the fit, as we all know, is never as close as we would like it to be. Our dissatisfaction with our models, at least whenever the pendulum departs from the introspective end of its swing, generates an additional force for instability. Levins, the biologist I referred to earlier, puts the point well when he says 'There is no single, best all-purpose model. In particular, it is not possible to maximize simultaneously generality, realism, and precision' (1968:7). All three qualities are desirable, but since we cannot achieve all of them, the way is open in model-building for those cyclical instabilities so beloved of political scientists in their study of multi-cornered contests (Kramer and Hertzberg 1975:371-374). Indeed, nearer home, Anatol Rapoport (1959:371) has cautioned social scientists that they 'should not demand realism from the mathematician's models but only pertinence'. Max Black (1960:45) is rather more pessimistic when he writes that 'more commonly the mathematical treatment of social data leads at best to "plausible topology", . . . qualitative conclusions concerning distributions, of maxima, minima, and so forth. This result is connected with the fact that the original data are in most cases at best ordinal in character' (cf. Boulding 1952:73).

Should we accept as inevitable this continual ebb and flow of intellectual style or should we try to restructure our activities so that routine social science, or at least routine network analysis, can proceed in a more straightforward manner? Before tackling this question I would like to refer briefly to physics, that discipline whose image **casts** so long a shadow over the whole of scientific activity. In physics there is an accepted division of labour between the model-builders, the theoreticians as they are called, who still work with blackboards, pencils and paper, and the experimentalists who wear white coats and devour enormous research grants. This division seems to work, at least as shown by both the enhanced intellectual understanding of the physical world and the enhanced ability to manipulate it which physicists have achieved in the last hundred years or so during which this division has existed. Would a similar division of labour between theoreticians and applied social scientists yield equally spectacular results? Would each branch then be able to pursue wholeheartedly its own objectives, the introvert and extrovert aims of social science as I have labelled them, undistracted by the swing of the pendulum of intellectual fashion? I doubt it. It is always hazardous to rely on analogies with natural science in prescribing for social science, so we should in any case think twice before trying to model ourselves on the physicists. But there is another piece of evidence nearer to hand that also points against adopting this division of labour. Mathematical psychology is a specialism which provides a much more plausible picture than does physics of what might happen if network analysts were to partition themselves into pure and applied. The writings of mathematical psychologists are virtually unintelligible to most of their colleagues in other branches of psychology, so that the division of labour generates not greater productivity but merely greater segregation; the ivory tower becomes a ghetto (Barnes 1972:1422). I think there is a danger that this may happen in sociology, even in network analysis. In any case we should remember that what looks pure in one context becomes applied in another. In my own university, for example, we have a department rejoicing in the name of 'Applied mathematics and theoretical physics'. The purity of even the physicists is tainted in the eyes of the mathematical Brahmins. It seems to me essential that pure and applied should in social science remain a continuum along which individual scientists are encouraged to wander, moved by their curiosity and their conscience and talking to everybody they meet on the way.

The evidence for the existence in social science of the oscillatory model I have sketched must, as they say, wait for another occasion, less light-hearted than this one. In brief, I think that in

network analysis the initial impetus came from a desire to understand the real world. We had only very crude analytic tools. Enthusiasts then started to develop tools for their own sake, and the link with the real world was weakened. Some of these tools looked very powerful, but not until a great deal of spadework had been done on both the hardware and software of computers could they be used. My guess is that the tide is beginning to turn again, and that the next few years will see much more attention given to questions of application and falsifiability as we confront powerful analytic tools with more data from the real world.

However, the forward glance I want to make is directed not only at what should be our policy for the next five or two years but also at what consequences there might be for policy in the longer term if the oscillatory meta-model of social science has any validity. If we realize that there is this alternation of intellectual fashion, should we continue as before, naively letting the pendulum swing to and fro but pretending not to notice the periodicity in its movement? Or, following in the footsteps of Maynard Keynes, should we aim to influence the course of events by trying to damp down the swings, by swimming against the tide? In periods of heightened introspective activity should we exhort our colleagues to leave the fun and games and start collecting data from the real world? And, in periods when there are urgent calls for prescriptions on how to deal with, for example, declining morale in inner cities, or excessive use of energy, or inefficiency in the use of social services, should we then demand time to elaborate our intellectual and analytic armoury rather than base our policy recommendations on findings we know to be inconclusive? I suppose there is also a third possibility to consider, of trying to increase the amplitude of the pendulum's swing, but I am unable to think of arguments that would support this kind of strategy. However the other two possibilities are, if I may be allowed to call on the language of the United States Navy, strategies rather than tactics, and we are well advised to have our plans ready for action at both levels even if, at the strategic level, we decide after due deliberation that we should content ourselves with nature or history taking its course without trying to change it.

We should also be aware that there are other long term movements in science that are likely to impinge on our praxis as social scientists in ways that are difficult to predict. One of these movements particularly relevant to network analysis is that from positivism to epistemological populism (Barnes 1981:22). Almost everything published in the field of network analysis is written from a point of view that many of my sociological colleagues, and I think many social anthropologists as well, regard as naively positivist. Network analysts confidently propose to model social behaviour in all its details, adopting the natural science paradigm without reservation and undeterred by any of the warnings sounded by philosophers of science against such superhuman, hubris risking, ambitions (cf. Putnam 1978:65; Barnes 1980:25-35).

Boldness, naivety and even brashness have a necessary place in the quest for scientific enlightenment, and I think that, at the tactical level, we should probably continue to press on as before. Positivism still has plenty of life left. But we should at least realize that much of the resistance to network analysis springs from a philosophical objection to what is seen as the reification of relations between individuals, and as an attempt to count or measure qualities which are inherently problematic, contestable or negotiable, and therefore uncountable. Maybe at the strategic level we ought to explore the possibility of developing a model of social action that is less a direct import from the natural sciences and which takes adequate account of the reflexive and self-correcting qualities of human behaviour.

There are also other processes that we have to treat as unidirectional and which ensure that the pendulum does not simply swing to and fro endlessly in the same trajectory. Mathematical reasoning is pre-eminently cumulative, so that the mathematically inspired models we construct become steadily more sophisticated with each swing. There is a good example of how an advance in mathematical thinking leads to an advance in model building in a recent paper by Seidman and Foster (n.d.). They propose a new way of looking at what they call, somewhat oddly, 'social events' and 'pseudo-events'; these are the partially overlapping sets of neighbours in social space that are mobilized for a variety of local tasks. They give a discursive account of their analytic procedure and then say 'In a more formal treatment, we adopt the concepts, terminology and notation of the mathematical theory of hypergraphs. . . . In fact, the hypotheses that were developed in the preceding paragraphs would have been very difficult to conceive and state without the hypergraph formalism'. As you know, it is only fairly recently that Berge's work on hypergraphs (1973) has become accessible in English. What I find interesting is that, although they claim to be dependent on the formalism of hypergraphs, Seidman and Foster are able to present a lucid description of their analysis without once invoking the technical terms hypergraph and hyperedge. We should defend our right to use jargon when necessary, while remembering that we preach to our colleagues, numerate and innumerate alike, not to mystify them but to enlighten them. As Fraser Darling (1947:77) once defined it, 'good research is orderly thinking plainly said'. That so much activity in many branches of social science consists of exegesis is a sad comment on our failure to follow that precept.

Technology is also, in perhaps not quite so strong a sense, a cumulative branch of knowledge and practice. We are all well aware of how formidable the impact has been on our professional activities by advances in the technology of information processing. Most of the models that have been produced in network analysis in the last ten years or so would still be mere toys, suitable for use only within the ivory tower, were it not for the computers through which alone they can be put to work.

From this point of view, network analysis, and a good deal of the rest of social science, characterized as they are by a combination of oscillatory and cumulative movements, show themselves to be indeed sciences; they belong to the tradition of Euclid rather than of Plato. There is a significant cumulative movement in philosophy but, at least to the outsider, the oscillations seem to outdistance the forward advance. In the creative arts the great masterpieces are never superseded. Even at this moment, classical Greek tragedies are being acted before full houses more than two thousand years after they were first performed. The plays of Aeschylus and the philosophical works of Plato remain therefore permanently in print, an enduring source of employment for a thriving exegesis industry. The books of Euclid have disappeared long ago from the reading lists of students. One of the discreditable characteristics of science, in contrast to the humanities, is that landmark books go out of print, for they are superseded by later work in which their once new findings are incorporated and surpassed. We should remember too that we, in particular among social scientists, follow in the steps of Galileo rather than those of Plato's countryman, Aristotle. For it was the switch from the study of attributes, as practised by Aristotle and characteristic of the classic and medieval worlds, to the study of relations which led both Kurt Lewin (1933:5-10) and Lévi-Strauss (1963:33, 301, 307) to see in Galileo the pioneer of modern structuralism (cf. Mach 1960:168). Yet the works of Galileo, like those of Euclid, are today sadly but appropriately neglected as compared with those of Aristotle. Thus as our own modest contributions to knowledge slide into early oblivion, gathering dust unsold and uncited, we can console ourselves that this is evidence that we are indeed scientists and not litterati. In such a context we may surely be excused for forgetting that instant obsolescence is a necessary but not a sufficient indicator of scientific writing.

One aspect of the oscillatory model that has been implicitly recognized by many writers on network analysis is the shift from the use of the notion of network as a metaphor to its employment as a precisely specified model. I think that most writers, myself certainly included, have seen this shift in Wiggish terms, as a forward and irreversible step in the right direction, a cumulative rather than an oscillatory movement. There is some support for this view from Max Black, when he says that 'Perhaps every science must start with metaphor and end with algebra; and perhaps without the metaphor there would never have been any algebra' (1960:64). However I now believe that we would be foolish to think that our specialism has become so mature that we can dispense with metaphor. The recent appearance of notions of charm and colour even in the world of particle physics should alert us to the heuristic power of metaphor. Klovdahl (1981), for example, has drawn attention to the importance of visual imagery in achieving comprehension of network phenomena and has shown how computer graphics can be put to good use to generate images that it would be impracticable to construct by any other means. We still need metaphors, and need a variety of them. The metaphors of graph theory have been of enormous benefit to the analysis of social networks (Barnes and Harary n.d.). Nevertheless we should avoid becoming hooked inescapably even on nodes and arcs. Max Black again has something pertinent to say: 'The more persuasive the archetype [the model] the greater the danger of its becoming a self-certifying myth'. Yet he goes on to say that 'a good archetype can yield to the demands of experience', which may perhaps be read as support for the oscillatory meta-model. As Braithwaite (1953:93) reminds us, echoing Edmund Burke, 'The price of the employment of models is eternal vigilance'.

If, ready to pay this price and remaining appropriately vigilant, we accept for the moment the validity of the oscillatory meta-model of scientific activity, how should we classify it? Clearly, the glaring absence of any real data in this paper places my model firmly in the introspective category; it is an exercise in meta-modelling just for the sheer fun and pleasure rather than the contribution it makes to solving the troubles of the world. But if I have tried to live up to Lave and March's dictum that playing with ideas is fun, why then have I suggested that, at least at the present time, we spend too much time in play?

To answer that question, we obviously have to turn to Douglas Hofstadter, whose *Gödel, Escher, Bach* (1979) has thrown so much light on self-referencing and allied phenomena. Hofstadter has recently made a distinction between what he calls healthy and neurotic sentences. 'A healthy sentence is one that, so to speak, practices what it preaches, whereas a neurotic sentence is one that says one thing while doing the opposite' (1982:14). The single word 'Terse' is an example of a healthy sentence, whereas a neurotic sentence is one such as this: 'Proper writing - and you've heard this a million times - avoids exaggeration'. Hofstadter's contrast between healthy and neurotic sentences can easily be generalized to larger entities, such as learned articles or even unlearned keynote addresses. Clearly what we are now reading is a neurotic address. I have constructed for fun a model which generates the instruction: thou shalt model for real, at least for the next five years or so. I am hoist by my own petard.

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C.A. GREGORY (Clare Hall, Cambridge). 1982. *GIFTS & COMMODITIES*. New York: Academic Press. 256pp. \$16.

Based on the highly complete mixture of the indigenous and imposed economic forms found in Papua New Guinea, *Gifts and Commodities* considers the theoretical work of the classical political economists, Marx, Sraffa, and others, and combines their approach, with the anthropological work of Mauss, Morgan and Levi-Strauss to produce a synthesis of economic ideas.

The book first examines the workings of the various parts of the economy separately, and then reassembles them in their concrete historical context. Using anthropological data by way of illustration, Dr. Gregory first reviews the competing theories of orthodox economics and political economy before analysing the particular problems of circulation and reproduction of gifts and commodities. To end Part 1, a conceptual critique of the orthodox approach is presented.

In Part 2 a number of theoretical propositions are developed based on the historical and anthropological evidence from Papua New Guinea. This theoretical framework accounts for the observed efflorescence of the indigenous economy. Dr. Gregory then examines the consequences this framework has for development policy. (From publisher's blurb).

Barbara Sneall DOHRENWEND (Public Health, Columbia) & Bruce DOHRENWEND (Psychiatry, Columbia), eds. 1981. *STRESSFUL LIFE EVENTS & THEIR CONTEXTS*. New York: PRODIST. 287pp.

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Chapter 1 provides a theoretical overview of determinants of health of the elderly in terms of a social-stress model. Chapter 2 summarizes research methodology. Subsequent sections of this book present pertinent empirical findings on retirement and gerontological health in detail. Chapter 3 validation of the concept of health and health-status change. Chapter 4 role loss as a stressful event in later life. Chapter 5 health effects of retirement. Chapter 6 the role of social-support networks. Chapter 7 gerontological health and social-support networks and Chapter 8 factors affecting health-services use. Finally, Chapter 9 provides a synthesis of the research results and implications for retirement planning and outlines a preventive strategy for handling life stress in later life. (From preface).

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CONTENTS: I. Meylan en Chiffres. 1. L'espace des nombres tendances et structure du peuplement. 2. La proximité spatiale des caractéristiques sociales dans Meylan. 3. Tendances politiques de l'électorat Meylanais. II. La Sociabilité Volue. 4. L'organisation traditionnelle de la sociabilité. 5. Le déploiement de la vie associative. 6. Les citoyens engagés et les réseaux d'associations. III. Famille, Voisinage, Generations. 7. Elle alla crier famine chez la fourmi, sa voisine. 8. Qui va garder le petit? 9. Fille de sa mère et enfant du siècle. 10. Le logement des enfants.

Filippo SABETTI (Pol Sci, McGill). 1983. POLITICAL AUTHORITY IN A SICILIAN VILLAGE. New Brunswick, NJ: Rutgers U Press.

This book attempts to unravel and explain the Sicilian problem within the microcosm of "Camporano," a pseudonym for a village in Western Sicily. The Sicilian problem is a multitude of problems inherent in the persistence of governmental failure, general social disintegration and mafia or outlaw societies. Drawing on field work experience, historical evidence and specialized documentary sources, the book provides many case studies of the Sicilian problem over the course of about two hundred years. The approach is essentially a rational choice approach in which the author attempts to develop a logic of the situation that offers an explanation for the afflictions that much of the rest of the world characterizes as backwardness or underdevelopment.

Starting with an examination of the Sicilian political economy tradition and village life under baronial jurisdiction, the study traces the structural changes in rural property rights and communal government that followed the 1812 abolition of feudalism and the 1816 introduction of centralized government and administration. What ensued suggests that the new structure of basic social institutions, rather than being an instrument for advancing rural development, was an essential source of frustration, conflict, repression and apathy -- of human adversity and economic inertia among Sicilians. The book advances the proposition that general social disintegration in Sicily is not an inability to act but the presence of institutional arrangements that create impediments to voluntary collective actions rather than facilitating those actions. The time series analysis of the Camporano mafia from the 1890s to the 1950s suggests that a general condemnation of the mafia is as inappropriate as general approbation. The Camporano mafia arose from a self-help tradition which, in the course of time, became corrupted and, ultimately a burden on villagers. Camporano village politics after World War II highlights the strength and weakness of the thesis which views modern political parties like the Communist party as the new agencies of political expression and representation for the true integration of Southern villagers in modern politics. The analysis for the same period also questions prevailing views about land reform, clientelism and center-periphery relations. (From author's summary).

Margaret H.B. SANDERSON. 1982. SCOTTISH RURAL SOCIETY IN THE 16TH CENTURY. Atlantic Highlands NJ: Humanities Press. 286pp. \$31.50

The social history of 16th century Scotland is that of a rural people and localized social life. Using previously untapped sources, the study describes standards of living and patterns of family life during the period and demonstrates that despite important political and religious changes nationally, rural society bore signs of stability and continuity. (Publisher's blurb).

Marjorie SHOSTAK. 1981. NISA: THE LIFE AND WORDS OF A !KUNG WOMAN. Cambridge, MA: Harvard U Press. 402pp. \$20.

"(The book recaptures) the active interplay of !Kung individuals: the teasing, fighting, final refusals to negotiate, and the lessons of necessary reciprocity ... Because of Nisa's gift in storytelling, we are witnesses to arranged trial marriages, the mutual assessments of potential co-wives, kin disputes, and sexual affairs, which serve as interpersonal conducts for the continuous band formation and fragmentation so basic to foraging life." (From Kay Warren's review in CONTEMPORARY SOCIOLOGY 12 (2): 231).

Mark BALDASSARE. 1979. RESIDENTIAL CROWDING IN URBAN AMERICA. Berkeley: University of California Press. 250pp. \$12.95.

A study of "the effect of crowding on human conduct." In Chapter 6, "working from an exchange perspective, Baldassare introduces the notion of 'specialized withdrawal' from unprofitable social contacts. He makes important distinctions among intimate friendships, group affiliations, and casual encounters... The author finds that only casual encounters (those with strangers) are reduced as neighborhood density increases. This line of thinking provides an important specification of the 'stimulus overload' explanations of urban social contact... Yet if urban theorists... are to capture the full range of city experiences, they must describe and analyze those urban places that foster sociability and contact among strangers." (From David Carp's review in the AMERICAN JOURNAL OF SOCIOLOGY, 88, 2: 460).

Charles SIMPSON. 1981. *SOHO: THE ARTIST OF THE CITY*. Chicago: U of Chicago Pr. 276pp. \$20.

"An account of the rapid development of the South Houston industrial district of New York City from a loosely connected network of artists ensconced illegally in the lofts of deserted factory buildings in the late 1950s into the current center for avant-garde visual art. Simpson describes the transition from a 'status community' comprising occupationally based support networks of artists to a 'territorial community' with sustained patterns of interaction among members. (It is) also an analysis of the key components of the SoHo art market, which are discussed in chapters on successful artists, galleries, gatekeeper-dealers, and the new art buyers" (and family life, with marriage as 'domestic patronage'). (From Catherine Valentine's review in *CONTEMPORARY SOCIOLOGY*, 11/82).

Frans DE WAAL. 1982. *CHIMPANZEE POLITICS*. Toronto: Clarke, Irwin. 223pp. \$27.95.

"De Waal, a Dutch ethologist, reports in the book on a trail-breaking study at the Arnheim Zoo, where a large breeding colony of chimpanzees was established in 1971. For the 1st time, scientists were able to observe the intricate social patterns of a colony; in the jungle, it was impossible to keep an eye on the chimps at all times. What de Waal and his colleagues discovered was an astonishingly complex and sophisticated system for keeping order, complete with characteristics previously regarded as being exclusively human." (From William French's review in the *TORONTO GLOBE & MAIL*, Jan. 29 1983).

Benjamin ZABLOCKI. 1980. *ALIENATION AND CHARISMA: A STUDY OF CONTEMPORARY AMERICAN COMMUNES*. New York: Free Press. 455pp. \$22.95.

"For sixty urban communes, Zablocki has developed a unique data set, which allows him systematically to investigate the relationship between networks of personal ties and the properties of groups taken as wholes. The analysis suggests major ways in which the wholes of communes are more than (and indeed much different from) the sum of their parts. The book's most striking findings come from data on networks of love, power and sexual intimacy within communes as these shape and are shaped by overall patterns of leadership and commune survival. (From Ann Swidler's book review in *CONTEMPORARY SOCIOLOGY*, 1/83).

John KENNEDY. 1982. *HOLDING THE LINE: ETHNIC BOUNDARIES IN A NORTHERN LABRADOR COMMUNITY*. St. John's: Institute of Social & Economic Research, Memorial University.

"(Kennedy's) aim was to investigate any changes the intervening years had brought in what the initial (Shmuel Ben-Dor) study described as Makkovik's multi-cellular community organization; that is, its strong sociocultural polarities marked by interethnic 'non-relations' between Inuit and Settlers despite the settlement's single, overarching administrative structure... (He) attempts to analyze his findings within a framework influenced by Frederik Barth's work on ethnic boundaries." (From Barnett Richling's review in the *CANADIAN REVIEW OF SOCIOLOGY & ANTHROPOLOGY*, 20 (Feb/83: 106).

Laura ENGELSTEIN. 1982? *MOSCOW, 1905: WORKING-CLASS ORGANIZATION & POLITICAL CONFLICT*. Stanford CA: Stanford U Pr. \$29.50

The Moscow workers' movement of 1905 depended on traditional craftsmen, skilled factory-hands and white-collar workers for its popular base and organizational development. The author examines in detail Moscow's social hierarchy and the internal stratification of its working class on the eve of revolution, and relates the structure of the urban community to the pattern of political upheaval in the critical period between January and August. She describes in greatest detail the revolutionary climax of the fall and winter, focusing throughout on three aspects of the workers' movement: forms of collective action, conflict with other social groups and with the authorities, and organization building. (From publisher's blurb).

Lynda Ann EWEN. 1978. *CORPORATE POWER AND URBAN CRISIS IN DETROIT*. Princeton, NJ: Princeton U Pr. 312pp. \$17.50

"The...3 chapters which constitute the core of Ewen's study contain a power structure analysis centering upon the structural relationships among the 41 largest firms with headquarters in the Detroit area. Power relations are traced through the interaction patterns, ownership holdings, and kinship networks that tie together the 421 Detroit area residents who hold directorships in the region's largest firms." (From Richard Child Hill's review in the *AJS* 88, 2: 466).

Gregory KEALEY. 1980. *TORONTO WORKERS RESPOND TO INDUSTRIAL CAPITALISM 1867-1892*. Toronto: U of Toronto Pr. 433pp. \$12.50

"Chapters 3-7 describe the response of Toronto's working class to the process of industrialization: their dealings with their employers around issues such as control of the work process, deskilling, (etc.). Also examined are the relations of groups of workers to one another. Kealey offers a wealth of information and detail. The remaining chapters discuss the more formalized working-class politics of Toronto: the basis of support for either the Tories or the Grits, elections and voting patterns, the emergence of labour candidates," etc. (From Paul Stevenson's review in the *CANADIAN REVIEW OF SOCIOLOGY & ANTHROPOLOGY* 20 (Feb/83): 108).

Julian LAITE (Manchester). 1981. *INDUSTRIAL DEVELOPMENT AND MIGRANT LABOUR*. Manchester: Manchester U Pr. 229pp.

Understanding (Third World industrial workers') group formation requires the investigation of 2 important questions. The 1st concerns the extent to which industrial workers become proletarianised, a process which includes the transition from peasant to industrial proletarian and the development of a working-class culture and consciousness. The 2nd concerns the extent to which contemporary industrial development requires proletarianisation, particularly in underdeveloped countries.

Workers' responses to industrial development involve institutions such as the family and the trade union. Networks of kin, friends and workmates are established, to help people confronted by problems of survival and change. In this study the focus is on migration from agriculture to industry, and it is the dimensions of a worker-peasant existence that are explored. (It focuses on the Cerro de Pasco highland mining region of Peru).

CONTENTS: Industrialisation, proletarianisation and migration. Industrial development and mining in Peru. The industrial development of highland mining. The political organisation of the mineworkers. The rural origins of migrant labourers. The migrant response. The social networks of migrant labourers. Work-groups and age-groups. The orientations of migrant labourers. Industrial development and migrant labour.

Emmanuel LE ROY LADURIE. 1979 (1980). *CARNIVAL IN ROMANS*. New York: George Braziller. 426pp. \$8.95.

Romans was the focal point of the conflict. On the local level the craftsmen used their trade confraternities to organize their challenge to the town notables, who were led by Judge Antoine Guerin, the powerful boss of the local political machine. February 1580 saw Carnival arrive on schedule. . . and transfigure everything. The winter festivities were a reminder of the days when prospective Christians buried their pagan ways in Saturnalian outburst. In this way they prepared for Lent, which was in turn a cleansing process culminating in baptism at Easter, the time of spiritual birth or rebirth. Pagan excesses were brought to a halt by the trial and execution of a Mardi Gras effigy. But Carnival also dealt with social sins or ills, on which the community unfortunately could reach no consensus. In other words, the elimination of social ills implied class struggle, with greedy notables on one side and rebellious peasants on the other. Each group entered violently into Carnival, confronting the other with theatrical and ritual gestures leading up to the final massacre.

Although it was a strictly localized incident, the Carnival in Romans represents a deep probe into the geological stratifications of a dated culture. It informs us about a specific city and a particular province. More generally speaking, it elucidates the urban dramas of the Renaissance, at the time of Reformation, the beginning of the Baroque age, and the rise of the Catholic Counter-Reformation. (From preface).

James SIMMIE (Soc, Univ Co, London). 1981. *POWER, PROPERTY & CORPORATISM: THE POLITICAL SOCIOLOGY OF PLANNING*. London: Macmillan. 350pp. C\$27.50

He describes how a city's power structure works by making a detailed study of the development of Oxford since the Second World War. He traces the decisions taken by investors and public authorities operating there, and shows who benefitted from them. He calls the pattern which emerges 'imperfect pluralism'. Its benefits are distributed unequally, in ways which reflect the influence of the city's larger and more lasting organisations -- institutions of the labour movement, the state, and semi-feudal authorities such as Oxford's colleges, besides those of a capitalist economy. It is the 'small men' -- the unorganised individuals in all social classes -- whose interests tend to be neglected. (From David Donnison's foreward).

Sharon ZUKIN (*Soc, Brooklyn*). 1982. *LOFT LIVING: CULTURE AND CAPITAL IN URBAN CHANGE*. Baltimore: Johns Hopkins Pr. \$16.95

Charting a course through the worlds of high finance, politics, real estate, and the arts, Zukin offers an incisive look at the rise of loft living as an integral part of the 'deindustrialization' of America's older cities. (Publisher's blurb). She shows "how basic changes in the structure of the United States economy intersected with specific cultural conditions and financial circumstances to change the face of lower Manhattan." (From David Harvey's blurb).

Harold CROOKS. 1983. *A DIRTY BUSINESS: THE INSIDE STORY OF THE NEW GARBAGE AGGLOMERATES*. Toronto: James Lorimer. 200pp. \$7.75.

The author examines the 4 huge corporations that control the multi-billion dollar garbage industry in North America, and details the background of corporate mergers and takeovers, price-fixing, illegal tactics and links to organized crime. (Edited from Publisher's blurb).

Robert FAULKNER (*Soc, Mass.-Amherst*). 1983. *MUSIC ON DEMAND: COMPOSERS AND CAREERS IN THE HOLLYWOOD FILM INDUSTRY*. New Brunswick, NJ: Transactions Books, \$24.95

The book is about social structure, productivity, network centrality, and success in the film business. It shows that the Hollywood film industry, like most work communities is dominated by a highly productive and visible elite who exercise major influence on the control of available resources, career chances, and access to opportunity. Faulkner traces a network of connections that bind together filmmakers (employers) and composers (employees) and reveals the structure of work allocation among composers and the division of labor within the film community. Using blockmodeling (CONCOR) and personal interviews, the following pattern unfolds:

1. The breadth and diversity of ties a freelancer maintains reflect his dominance and strength in networks of collective action.
2. Freelancers and film producers who are tied to each other by recurring work transactions are more closely coordinated and interlocked than those who have only a single work point or nonrecurrent tie.
3. Freelancers who are tied to important filmmakers are themselves more important than those tied to an equal number of filmmakers on the periphery of network activity.
4. Freelancers who are associated with successful film projects are themselves more visible than those associated with an equal number of less successful projects.

Market matching is a dual entity process in which films are put together as combinations of personages, where personages are defined socially by their sociometric-star location in networks of other such personages, and where access to a diversity of producers and directors breeds cumulative advantage. A resource-alternative theory is advanced to show how Hollywood participants attempt to reduce risk and uncertainty, are highly seduced by personage, and that among the survivors increases in resources typically yield increases in selectivity. Key film projects circle in on a few; they dominate the scene. They have access to a number of significant films and filmmakers; they have a chance to select and hence heighten their presence by access to a diversity of projects.

MUSIC ON DEMAND establishes that a small number of producers and composers (as well as cinematographers, directors, and screenwriters) produce far more than their proportionate share of the work, with fifty percent of those with any film credit never working on another film in their entire careers. Interviews with those composers considered to be elite (the ten percent who write almost half the film scores) and those on the industry's periphery (the ambitious freelancers who hope to break in through television and other work) reveal how they perceive their careers and work, how they define commercial artistic success, and how they establish, or try to establish, those vital connections with filmmakers in a freelance contracting system. These points are detailed with respect to the proposition that increasing centrality and network range are associated with increasing access to diverse kinds of resources and opportunities. (Author's summary)

Manfred KOCHEN & Karl DEUTSCH. 1980. *DECENTRALIZATION: SKETCHES TOWARD A RATIONAL THEORY*. Cambridge, MA: Oegeschlager, Gunn & Hain. 35pp. \$27.50

"The authors combine concepts and techniques from economics, organization theory, operations research, location theory, and queuing theory to conduct a cost-benefit analysis of decentralization in client-centered service organizations...Of great analytic value are the 8 dimensions of decentralization identified: pluralization; dispersion; functional specialization; feedback lag; hierarchical flatness; delegation; participation by clients in decisionmaking, performance and reallocation of services; participation by clients in the redesign of the service system; ..Their work goes beyond the purely descriptive to consider the possible arrangements that organizational forms might assume." (Edited from W. Richard Scott's review in *CONTEMPORARY SOCIOLOGY* 12 (2): 158-69).

The study suggests that ready-made and inexpensive merchant networks could adapt quickly and effectively to other tasks if strong political resistance to a private merchant role could be overcome. It shows that the economic and political rationales that have been put forward for limiting the merchant role are manifestly unsubstantiated. They are, the study tries to show, largely a cover for political positions that could not be openly justified.

A revised model for rural development emerges from the analysis of the role merchant networks have played in developmental activities in India. Specifically, the model suggests a greatly increased use of local merchant networks as promoters and commercializers of development-linked goods and activities. The study shows that such networks are ubiquitous in India, and that they can spread rapidly and flexibly into new geographic and product areas with a minimum of incentive and encouragement. Moreover, commercial structures similar to those in India exist in much of the developing world, although certainly the indigenous merchant structure in India is among the most sophisticated and ramified. (From preface).

Fernand BRAUDEL. *THE WHEELS OF COMMERCE: CIVILISATION & CAPITALISM, 15TH-18TH CENTURY, VOL. 2.* Tr. by Sian Reynolds. London: Collins. £17.50

The formation of a market economy was not the work of capitalists. They were 'the great predators' on the outside, always ready to 'bend the rules of the market economy' to suit their interests. Capitalism was 'a form of social parasitism.' The 'initial boom of mechanisation' did give a spurt to the self-regulating market economy, but it was "temporary (and never complete), a break in a much longer continuity." (Edited from Geoffrey Barraclough's review in the *GUARDIAN WEEKLY*, 5 Dec 82).

Eric WOLF (Antiro, Hunter, NYC). *EUROPE AND THE PEOPLE WITHOUT HISTORY.* 1983? Berkeley: U of California Pr. \$8.95

In 1968 Wolf wrote that anthropology needed to discover a "history which would account for the ways in which the modern world was 'created as a social system'" and which "would strive to make analytic sense of all societies, including our own." This work is an outcome of that concern. Wolf's inclusive, unifying history is a web of changing and complex relationships spun by Europe's rise to world domination. His history of European expansion includes the "people without history"--the peasants, laborers, minorities, and "primitives" long excluded from the traditional recounting of the development of the modern world. (From publisher's blurb).

Randall COLLINS, ed. 1983. *SOCIOLOGICAL THEORY 1983.* San Francisco: Jossey-Bass. \$15.95 (ASA members).

The 1st of an annual volume sponsored by the American Sociological Association.

SELECTED CONTENTS: Chapter Four (Michael Hammond, "The sociology of emotions & the history of social differentiation") elaborates on Durkheim's description of social differentiation and stratification; proposes that the limited human capacity to generate emotions can play a casual role in shaping the structure of human social creations; and examines the role of emotions in the historical evolution of hierarchical transformations.

Chapter Six (Barry Wellman, "Network analysis: some basic principles") critiques the normative, categorical, dyadic, and bounded group emphasis prevalent in many sociological approaches. It also demonstrates how network analysis can show new ways to describe social structures, reformulate basic sociological issues, and better explore power, stratification, and structural change. (CONN note: A slightly revised version of Structural Analysis Programme Working Paper 1B).

Chapter Seven (Mark Granovetter, "The strength of weak ties: a network theory revisited") updates the argument that the weak ties of acquaintanceship are more significant than strong ties of close friends of the social fate of individuals. This chapter relates the role of weak ties to gaining employment, the flow of ideas, the sociology of science, and cohesion in complex social systems. (CONN note: What we presume is the same paper is also available in Peter Marsden & Nan Lin's *SOCIAL STRUCTURE AND NETWORK ANALYSIS*). (Chapter descriptions from publisher's blurb).

The "Theory news" section includes Nicholas Mullins, "Theories and theory groups revisited."

Fritjof CAPRA. 1982? *THE TURNING POINT: SCIENCE, SOCIETY, AND THE RISING CULTURE.* NY: Simon & Schuster. 464pp. \$17.50

Jorge NIOSI (*Soc, Quebec à Montreal*). 1981. *CANADIAN CAPITALISM*. Toronto: James Lorimer. 224pp. (Originally published in French as *LA BOURGEOISIE CANADIENNE* by Boreal Express, Montreal).

The postwar years saw Canada flooded with foreign investment, and the country came to be seen as an economic colony of the U.S. Jorge Niosi argues that the strength of Canadian big business has been underestimated and the importance of foreign control exaggerated. The data he has assembled show that, since 1970, the Canadian business establishment has been steadily gaining ground at the expense of foreign investors. Niosi examines the anatomy of corporate power in Canada, stressing the difference between the owners of large corporations and the lawyers, accountants and others who advise and assist them. He compares the Anglo-Saxon business establishment with the francophone interests based mainly in Quebec. And he offers the first analysis of the role of public enterprise in the Canadian economy, concluding that most government-owned corporations are run by boards of directors dominated by Canadian corporate businessmen. (From Publisher's blurb).

Anthony SAMPSON. 1981. *THE MONEYLENDERS*. Sevenoaks, Kent, England: Hodder & Stoughton. 377pp. C\$4.95

This is a book about the relationship between bankers and nations, particularly developing nations -- from England in the fourteenth century to the United States in the nineteenth century to the many-coloured developing world of the 1980s. I try to show how banks grew up into the huge global organisations that we know today, and how they operate across frontiers in the contemporary world; but I do not attempt to cover the many complex activities of domestic banking and the economic theories that lie behind them. My interest is in the international politics of banking, and the personalities that lie behind them. Many economists have described banking in terms of the interplay of macro-economic forces; but this book tries to show how banks are also affected by the character of their leaders and the problems of particular competition, and I have tried to show how the world looks through the eyes of individual bankers. (From preface).

Anton ALLAHAR (*Soc, Toronto*). 1982. *THE SUGAR PLANTERS OF COLONIAL CUBA*. Toronto: Two-Thirds Pr. 261pp. \$9.50

In the present study, the author seeks to show that the 19th century Cuban sugar planters were neither passive nor unenterprising. Rather, as a group they often acted very rationally in pursuing and defending their own interests. To say that their passivity led to economic backwardness is quite a different matter from stating that they did try to promote the development of the productive forces in sugar but were not always successful. In this study, the aim is to outline those concrete obstacles which frustrated the developmental plans of the planters and the types of strategies which they devised to combat them. (Edited from publisher's blurb).

Alain DE JANVRY. 1982. *THE AGRARIAN QUESTION & REFORMISM IN LATIN AMERICA*. Baltimore: Johns Hopkins Pr. 311pp. \$8.95

"The agrarian question in Latin America is the substantive core of a study that ranges over theoretical disputes within the Marxist tradition, conventional developmental theory and policy, world hunger, the theory of the state, and the current international economic crisis... (It is) the most lucid interpretation of uneven development in the world economy." (From John Walton's review in *CONTEMPORARY SOCIOLOGY* 12 (2): 146).

Hanna BATATU. 1979. *THE OLD SOCIAL CLASSES AND THE REVOLUTIONARY MOVEMENTS OF IRAQ: A STUDY OF IRAQ'S OLD LANDED AND COMMERCIAL CLASSES AND OF ITS COMMUNITIES, BA'THISTS, AND FREE OFFICERS*. Princeton, NJ: Princeton U Pr. 1283pp. \$85.

"The central theme (is that) 'Iraq consisted to no little extent of distinct, self-absorbed, feebly inter-connected societies.'...The author's ubiquitous subsidiary theme is the persistence and salience of primordial and local ties in politics. It is encountered in the process of national integration, spread of political ideologies, formation of political parties, and above all, in concerted political action aiming at the seizure and securing of power." (From Said Amir Arjomand's review in the *AJS* 88, 2: 470-71).

Paul LONDON (*New England Economic Research Off., Wash. DC*). 1975. *MERCHANTS AS PROMOTERS OF RURAL DEVELOPMENT: AN INDIAN CASE STUDY*. NY: Praeger. 159pp.

This study focuses on rural merchants. Based on nearly 200 interviews, (it) shows that little-noticed, often abused private shopkeepers adapted remarkable to India's rural needs in the past decade by selling 100s of millions of dollars worth of vital fertilizers and irrigation equipment. Their work helped make agricultural gains possible, yet the Indian government barely tolerates their continued existence in rural areas.

"Capra...tries to identify and combat what may be the deepest bias of Western conceptual life, and a primary source (in his opinion) of our current ills and unhappiness...The trouble started nearly 400 years ago when a previous organicism yielded to the conceptual paradigm of Cartesian mechanism--an approach pervading all disciplines and characterized by an explanatory tactic that separates, analyzes, and reduces the world to basic particles of atoms and molecules... (But) in the absence of a well-formulated substitute for Cartesian thinking, Capra is reduced to selective quotation from the heroes and harbingers of his new order." (From Stephen Jay Gould's review in the NY REVIEW OF BOOKS, 3 March 83: 23).

William MELODY, Liora SALTER & P HEYER, eds. 1979? *CULTURE, COMMUNICATION & DEPENDENCY*. Toronto: Fitzhenry & Whiteside. \$20.25

The 1st assessment of the entire body of Harold Innis' work and its applications to the contemporary study of communication and political economy. (It) explores the touchpoints between Innis' political economics and communications analyses, between Innisian and Marxian analysis, and between Innis and McLuhan. It examines the applications of Innis' ideas to the current issues of resource extraction, communication policy, and communication and culture. (From publisher's blurb).

Hubert BLALOCK (Soc, North Carolina) & Paul WILKEN. 1979. *INTERGROUP PROCESSES: A MICRO-MACRO PERSPECTIVE*. New York: Free Press. 645pp. \$22.95

"Its objective is to provide models of intergroup relations ranging from micro to macro. (The authors) first examine microlevel models of choice under the rubric of subjective expected utility approach. Next, they consider dyadic and triadic processes of exchange and equity. Aggregation into collectivities and contextual effects complete the transition to the macro level where the authors analyze problems of resource allocation and segregation/integration. An examination of dynamic processes completes this complex work." (From Steve Rytina's AJS review, 11/82).

J. Clyde MITCHELL (Nuffield, Oxford), ed. 1980. *NUMERICAL TECHNIQUES IN SOCIAL ANTHROPOLOGY*. Philadelphia: Inst. for the Study of Human Issues. 290pp. \$9.95

"Each of the eight contributions to this volume illustrates the application of a numerical technique to an anthropological problem. The techniques used and the problems addressed are quite diverse. (Among them), Crump represents marriage, and political and transportation networks in Mayan Mexico, using graph theory. Garbett reanalyzes data on exchange relations among Indian castes, also using graph theory. Thompson uses catastrophe theory to model the fluctuations of confidence, credit, and pigs in the Highland New Guinea pig cycle. The editor's introduction to the volume highlights some of the volume's important methodological issues." (Edited from James Shilts Boster's review in CONTEMPORARY SOCIOLOGY, 11/82).

C.A. SHARPE. 1978. *VACANCY CHAINS AND HOUSING MARKET RESEARCH: A CRITICAL EVALUATION*. St. John's, Newfoundland: Memorial Univ. Dept. of Geography Research Note 3. 94pp.

CONTENTS: Components of change in the housing stock. House price effects. Vacancy chains: theory and technique. New construction, turnover and filtering. Vacancy chains and filtering. The uses of vacancy chains. Who benefits from new construction. Markove models of vacancy transfers.

William BROWN (Math., McGill), ed. 1982? *REVIEWS IN GRAPH THEORY*. 4 vols. Providence, RI 02901. American Mathematical Society (PO Box 1571). \$200. (AMS members \$50/students \$25).

Contains 9600 reviews published by MATHEMATICAL REVIEWS (vols 1-56) between 1940 & 1978. A classification scheme containing over 500 categories was developed for the purpose. Every review has been assigned 1 primary classification and on the average (CONN note: mean or median?) 1 secondary classification. The potential reader requires no more background than would be required to read papers which are reviewed in the compendium. These vary from highly erudite papers in other areas of mathematics where graph theory is used as a tool to solve specific problems to elementary descriptive papers which would be understandable to high school students. (Edited from publisher's blurb).

(CONN note: Readers' feedback wanted: is it worth chatting up an AMS student to get this for \$25?)

Fred ROBERTS. *GRAPH THEORY & ITS APPLICATIONS TO PROBLEMS OF SOCIETY*. 1978. Philadelphia PA 19103: Society for Industrial & Applied Mathematics (117 S 17 St). 122pp. \$15.50

Explores topics in graph theory and its applications to transportation, genetic and energy problems, pollution, perturbed ecosystems, urban services, and social inequalities. The author presents relatively atypical graph-theoretical topics--e.g., intersection graphs, indifference graphs, seriation, sign stability and solvability, food webs, niche overlap graphs, and boxicity to best illustrate applications. Results of applied interest are also emphasized in the discussion of more traditional topics, such as colorability, independence, and eulerian chains and paths.

Gerhard HELD & Margit HESSLER (Soc, Köln). BIBLIOGRAPHIE ZUR THEORIE UND ANWENDUNG VON VERFAHREN DER MULTI-DIMENSIONALEN SKALIERUNG UND CLUSTERANALYSE. 1982. Universität zu Köln: Zentralarchiv für empirische Sozialforschung, Bachemer Str. 40, D-5000 Köln 41.

So nötig eine Bibliographie angesichts des kaum absehbaren und verstreuten Schrifttums zur Clusteranalyse und Miltidimensionalen Skalierung ist, so gross sind auch die Probleme, wenn man versucht, diese Aufgabe in Angriff zu nehmen.

Es versteht sich von selbst, dass diese Bibliographie bei der Fülle möglicher Quellen niemals vollständig sein kann und eine stetige Aufgabe bedeutet. Weiterhin tritt das Problem hinzu, dass gerade 'Veröffentlichungen' zur Clusteranalyse/MDS in den Anfängen oftmals unveröffentlichte Berichte waren, die über geheime Kanäle in eingeschworenen Zirkeln weitergereicht wurden. So ist uns sicher das eine oder andere Manuskript nicht bekannt oder eine spätere Veröffentlichung ist unserer Aufmerksamkeit entgangen. (From preface).

Jerome CLUBB and ERWIN SCHEUCH (Köln), eds. 1980. HISTORICAL SOCIAL RESEARCH: THE USE OF HISTORICAL AND PROCESS-PRODUCED DATA. Stuttgart: Klett-Cotta. 536pp.

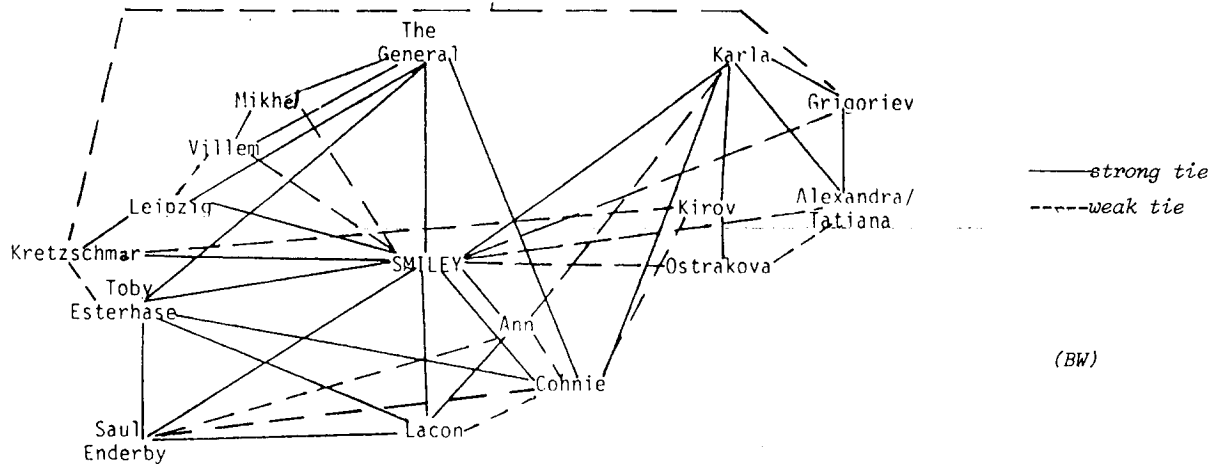
"The subject is the use and analysis of data that were not originally generated for research but for certain official, commercial, or private ends. Examples are national censuses, parish records, business directories, polls, interviews, personal files, and letters....How do we get from sources to data? What techniques are we to use?... Network analysis and the related techniques--the subject of section 6--not only help to identify groups at the microlevel but can also be used at the national level to map the internal leadership structure of international formal and informal interest organizations." (Edited from Fleming Mikkelsen's review in CONTEMPORARY SOCIOLOGY, 11/82).

SMILEY'S NETWORKS

J. Clyde Mitchell (Ruffield, Oxford) and Barry Wellman (Sociology, Toronto)

Did George Smiley get it right?
Has he read his network literature? (JCM)

"When was the last time you had anything to do with Vladi's network actually, Toby?' Smiley asked.... Toby digested this question at his leisure. 'Network?' he echoed incredulously at last. 'Did I hear network, George?' Laughter in the normal run played little part in Toby's repertoire but now he did manage a small if tense outburst. 'You call that crazy Group a network? Twenty cuckoo Balts, leaky like a barn, and they make a network already?' 'Well we have to call them something,' Smiley objected equably. 'Something, sure. Just not network, okay?'" (from John Le Carre, SMILEY'S PEOPLE, Pan Books, 1980; p. 144)



THESIS SUMMARIES

MAYORAL LEADERSHIP AND COMMUNITY INITIATIVE

Janet Kelly (Ph.D., Sociology, Cornell, 1983).

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Communities in the Northeast United States are facing increased difficulties as demographic and economic changes occur. Local leaders, mayors in particular, are in a position in which the fiscal crisis is threatening them. Officials at other levels are encouraging the enhancement of the local unit to deal with these issues through capacity-building efforts.

Mail questionnaires were sent to mayors in the county seat and/or largest place in 300 counties of the Northeastern United States. Descriptions of the community characteristics are given, including mayoral backgrounds and characteristics, crucial issues facing the communities, mayoral agendas and mayoral assessment of community power structure and political process. The issue orientation of the mayors in this sample supports the conceptualization of the city as a growth machine.

Four mayoral types are identified on the basis of the mayor's orientation to local and/or translocal network building--ceremonial, caretaker, entrepreneurial and activist mayors. These mayoral types are incorporated into the model of mayoral task initiative which posits that community characteristics and mayoral background impact mayoral task initiative through the network building and agenda setting processes of the mayor. Refinements are suggested, particularly the need for new dependent variables of mayoral effectiveness.

FROM MANOR TO MARKET: STRUCTURAL CHANGE IN ENGLAND, 1536-1640

Richard Lachmann (Ph.D., Sociology, Harvard, 1983)

This work offers a causal explanation for the transformation from manorial to market labor allocation in England between 1536 and 1640. Social structure is diagrammed for the periods before and after the Black Death, after the Dissolution of the Monasteries, and in the early seventeenth century. The period, 1536-1640, is thus identified as the 'window' during which the structure of land and labor allocation and control changed to an extent unprecedented in English history.

The manor is defined and described as a micro structure, and as an element in a larger structure which includes a macro level at which elites competed for resources and authority. A tripartite elite of crown, clergy, and lay landlords shared power at both structural levels. The divergence of elite interests limited the autonomy of individual manor lords, while peasant solidarity on the micro level circumscribed the outcomes of conflicts over land tenure. Demographic cycles and landlord-peasant conflicts are shown to have not significantly altered manorial structure.

The Dissolution of the Monasteries was a culmination of elite conflict, and eliminated the clergy as an independent power at both structural levels. The crown, due to its lack of a bureaucracy, and the fiscal demands of its position in an international system of states, was unable to retain the micro level property and power seized from the monasteries. Lay landlords assumed the bulk of monastic manors and income rights taken by the crown. The structural division between crown and lay landlords was sharpened by the Elizabethan effort to undermine the micro bases of magnate challengers to crown authority. Micro level powers once held by crown, clergy, and magnates was concentrated in the hands of county-based gentry.

Gentry micro level strategies were responses to the threats of crown challenges from the macro level and peasant land tenure claims on the micro level. 'Tight' county elites were able to gain full ownership of manor lands, pushing a plurality of peasants into landless status, blunting threats to gentry strategies to maintain micro level authority in the context of a structure changed by macro level elite conflicts. A market structure of labor allocation was an immediate outcome of conflict over land control.

LES RESEAUX D'INFLUENCE A SAINTE-PERPETUE: UNE ANALYSE PAR LA METHODE DE LA THEORIE DES GRAPHES.

Normand Leavy (Ph.D., Anthropologie, Laval, 1981)

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Notre thèse constitue une tentative pour utiliser la théorie des graphes dans le but d'analyser les réseaux sociaux d'influence existant au niveau de la prise des décisions collectives dans une communauté. Les positions respectives des principaux décideurs sont précisées à l'aide principalement du concept d'écart. Ensuite, certaines oppositions potentielles et actuelles entre des sous-groupes officiels et non officiels sont abordées dans le but d'évaluer le degré de monolithisme ou de polyolithisme existant au sein du groupe des principaux décideurs.

Le chapitre I expose d'abord comment l'idée de réseau est apparue et s'est développée dans le cadre limité de l'anthropologie sociale. Par la suite, quelques uns des principaux résultats concernant les réseaux d'influence dans le cadre de l'anthropologie sociale également sont présentés. De plus, quelques résultats obtenus de la psychologie sociale et de la sociologie y sont inclus. Nous nous limitons toutefois aux principales contributions touchant directement notre problématique des réseaux d'influence. Le chapitre se termine par un exposé de quelques uns des principaux concepts utilisés par les anthropologues, de même que par une brève discussion de quelques hypothèses.

Dans le second chapitre, après avoir présenté la communauté étudiée soit Sainte-Perpétue, nous tentons d'utiliser les concepts de la théorie des graphes dans le cadre d'une recherche ethnographique. Nous nous attachons surtout à décrire la structure de l'influence liant entre eux les principaux décideurs, à l'aide de la théorie des graphes. Plus précisément, nous évaluons quantitativement la position relative des individus par rapport à la circulation de l'influence. Nos données pour cette évaluation proviennent d'un questionnaire sociométrique et sont interprétées à la lumière d'entrevues et d'observations sur le terrain.

Au chapitre III, nous examinons comment s'inscrivent les réseaux par rapport à certains groupes institutionnalisés importants dans la communauté. En particulier, nous comparons le modèle opérationnel avec le modèle institutionnel de façon à dégager s'il y a ou non concordance entre les deux à l'intérieur de chacun des groupes considérés.

La thèse se poursuit au chapitre IV par une présentation des rapports d'influence existant entre certains sous-groupes dans la paroisse étudiée comme résultantes globales des relations d'influence inter-individuelles. De façon plus spécifique, quelques hypothèses concernant les possibilités de scissions entre ces divers sous-groupes et catégories sont émises. Partant de là, nous évaluons le monolithisme et le polyolithisme c'est-à-dire, selon nous, le potentiel d'opposition relative dans la communauté.

Enfin, le chapitre V analyse quelques réalisations collectives à la lumière des principaux résultats obtenus. Ces réalisations sont interprétées en fonction des réseaux en place dans la communauté.

En raison même de la rareté actuelle de travaux utilisant les techniques de la théorie des graphes pour décrire la structure de l'influence dans les communautés, il nous a été impossible d'effectuer des comparaisons inter-communautés; toutefois certaines comparaisons internes entre les relations étudiées sont présentées. Nous aboutissons principalement à des suggestions pour mesurer le degré de monolithisme ou de polyolithisme. Notre thèse constitue essentiellement une étape dans la solution de cette problématique. Nous proposons l'utilisation d'une méthode s'inspirant de la théorie des graphes et pouvant selon nous s'avérer profitable à l'anthropologie sociale de même qu'à la sociologie.

Notre contribution à l'anthropologie sociale par cette thèse se veut d'abord méthodologique bien que l'aspect purement analytique n'y soit pas négligeable. Une fois la méthode mieux établie et acceptée dans l'arsenal de l'anthropologue et du sociologue, les chercheurs pourront sans doute enrichir leurs analyses et conséquemment, l'aspect méthodologique occupera le second plan. On en viendra sûrement, du moins nous l'espérons, à approfondir davantage l'aspect "communication humaine" dans les réseaux.

SPECIAL JOURNALS

Abstracts from *SOCIAL NETWORKS* 4(3), 9/83.

HARRIS, Paul (Pacific Lutheran). "Structural change in the communication of precedent among state/supreme courts, 1870-1970." Pp.201-202.

State supreme courts often cite each other as authorities. These citations constitute a network of the interstate communication of precedent. I develop here a simple procedure for decomposing and standardizing variation in the strength of communication network ties, which yields terms for concentration (comparable to density), prestige variation, dependency variation, and variation due to the interaction of prestige and dependence. Applied to the interstate communication of precedent between 1870 and 1970, the procedure reveals several structural changes. The trend in the network over those hundred years was from a hierarchy dominated by a few Eastern courts, through a period of widespread production of precedent and homogeneous communication, to a decentralized regional structure with diffuse centers of authority.

GROFMAN, Bernard (Cal-Irvine) & Guillermo OWEN (Econ, Iowa & Cal-Irvine). "A game theoretic approach to measuring degree of centrality in social networks." Pp.213-24.

We present a new measure of degree of centrality in a social network which is based on a natural extension of the Banzhaf (1965) index of power in an N-person game.

MURRAY, Stephen O. (Language Behavior Lab, Cal-Berkeley) & Robert C. POOLMAN (San Fran. County Mental Health). "Strong ties and scientific literature." Pp.225-32.

Members of two "research clusters" each in social and biological science were asked how they had first learned of work they had cited in recent publications. While scientists *can* learn of new work *via* weak ties, they hardly ever did, because (1) a scientist's goal is to find particularly good work rather than to maximize information about all possibly relevant work and (2) scientists who are strong ties do not necessarily know identical literature.

LANGHEINE, Rolf & Norbert ANDRESEN (Pädagogik, Kiel). "A sociometric status index without subgroup membership bias." Pp.233-42.

Sociometric status is a widely used indicator to assess what is called popularity of a person within a group. The purpose of this paper is to show that status as defined by known indices may be biased whenever there are subgroups unequal in size within the total group and within-group choices are made probable than between-group choices. The problem of subgroup membership bias may be solved, however, by a simple linear transformation.

REITZ, Karl P. (Cal-Irvine & Chapman College). "Using log linear analysis with network data: another look at Sampson's monastery." Pp.243-56.

Fienberg and Wasserman's method will be used to analyze Sampson's (1969) well known data on 18 monks.

FEGER, Hubert (Hamburg) & Walter BIEN (Aachen). "Network unfolding," Pp.257-83.

Network unfolding is a measurement model for representing relational data by a connected and weighted graph. If the data - partial or complete rank orders - can be represented by such a graph then the complete graph yields a representation. However, our aim is to minimize the number of lines in the representation and to find a maximally reduced graph. The maximally reduced graph for a specific set of data may not be a tree but may contain one or more cycles. The scale level of the weights is at least that of an ordered metric scale.

Four examples are provided to illustrate the model and the algorithm to find the reduced graph. The first example serves to introduce the terms and notations and represents the similarity of Apachean languages. The communication network of the second example represents the exchange of positive messages as a directed graph. In the third example of the network structure of human associative memory we show by means of a Monte Carlo study that the obtained reduction of the graph is larger than to be expected by chance, and infer that the structure is different from that assumed by Anderson and Bower. In the fourth example on popularity status we conceive status as a social agreement structure. We consider network unfolding to be an alternative to other models of structure, e.g. multidimensional scaling, cluster, and factor analysis.

COMPARATIVE URBAN RESEARCH 9 (1), 1982. Special issue on "The evolution and diversity of urban systems," edited by Richard FOX and Carol SMITH.

CONTENTS:

"The political economy of Mesopotamian and South Indian temples: the formation and reproduction of urban society," Richard FOX and Allen Zagarell; "Alternate pathways to urbanism in the Medieval Maghreb," James BOONE and Charles REDMAN; "Tenochtitlan: the economic and political reorganization of an urban system," Ross HASSIG; "Placing formal geographical models into cultural contexts: the anthropological study of urban system," Carol SMITH; "The evolution of primate regional systems," Stephen KOWALEWSKI; "Modern and Premodern urban primacy," Carol SMITH.

Fox and Zagarell focus directly on the relationships, conflicts, and contradictions in society that underlie urban evolution and the diversity of urban systems. They show how temples in ancient Mesopotamia and medieval South India, by penetrating and breaking down kin-ordered communities, prepared the ground for the emergence of the territorial state. Although they do not detail the resulting urban order, Fox and Zagarell uncover a transformation of society that led to a concentration of sacral and profane control in state temples, and therefore to the primacy of the great ceremonial complex, as Wheatley (1971) has termed it.

Like Fox and Zagarell, Boone and Redman are also more concerned with the social determinants of urban evolution in the Maghreb than with rank-size distribution or other empirical characteristics of the urban system (which, as they indicate, represents a primate-type pattern). They find two urban systems developing in distinctive political-economic environments: one, based on control over caravan trade by inland capital cities, and the other, dependent on overseas trade managed by autonomous coastal entrepôts. From this original, differentiated urban system, Boone and Redman show how the further evolution of the two urban forms may reduce the differences between them. Inland capitals may come to take on trade and service functions like those of the coastal entrepôts, whereas coastal cities may lose their autonomy and become outposts of imperium.

Hassig's paper on Tenochtitlan gives equal weight to the formal properties of the urban system and the dynamic of societal relationships underlying it. He charts Tenochtitlan's rise as a primate center by its economic degradation of politically subordinate urban centers, a process which led to a "core-periphery" situation in the Valley of Mexico. That is as Tenochtitlan's population and, consequently, food requirements rose, cheaper and better-made wares were increasingly "dumped" on surrounding areas to encourage their specialization in primary production. Radical changes in urban location, function, and linkages within the Valley of Mexico resulted from the interaction of these productive, distributional, and political relationships. Hassig's paper thus provides a bridge to the remaining papers, which deal directly with the formal properties of urban systems.

Both Kowalewski and Smith concentrate on urban primate systems and how they can be explained. Smith includes a separate introduction to these two papers, reviewing the conceptual and technical literature upon which both she and Kowalewski draw. Kowalewski limits his analysis to preindustrial societies and combines ecological factors with the nature of intersocietal competition to explain the occurrence of stable primacy. Smith argues that the very concept of urban primacy conflates societies with markedly different political-economic sets of relationships; a proper examination of primacy requires disaggregating various sorts of primacy and urban systems and their attendant social orders.

ABSTRACTS

STRUCTURAL ANALYSIS PAPERS FROM THE DEPARTMENT OF SOCIOLOGY, U OF SOUTH CAROLINA, COLUMBIA, SC 29208

MAYHEW, Bruce & John SKORVETZ. *"Stratification and vertical mobility in organizations: interim report" 1981.*

In this interim report of our research two principal items are discussed. First, there is a general discussion of the status attainment perspective, the aim of which is to assess the utility of this kind of thinking to the problem of mobility in organizations. As a major alternative perspective to our own structural-allocation perspective, it merits attention in order that future collection of a data-set, as we have envisioned for personnel of various banks, might include information appropriate to the specification and testing of attainment type models. This discussion is brief principally because the application of attainment models to movement in an organization, as we envision it, both presumes and necessitates one component of a structural-allocation perspective, namely, knowledge of the criteria employed by job controllers to assign organizational statuses. Second, we develop basic theses of a structural-allocation approach to intra-firm mobility. An important development here is our denial of the validity of the classical ascribed/achieved distinction in favor of a view in which the movement of persons is centrally tied into status conferral processes. Finally, we include reports on specific investigations we have undertaken while the grant has been in force.

NOLAN, Patrick. *"Perspective on sociocultural evolution: external selection and internal motivation" 1981.*

Recent papers in the American Journal of Sociology suggest that current developments and continuing controversies regarding theories of sociocultural evolution may not be widely known or understood. To remedy this, the present paper explores important lines of development in contemporary sociological and anthropological theories of sociocultural evolution. Two general approaches appear to characterize theoretical work in this area, and they appear to be pursued independently. By using Gerhard Lenski's work to exemplify the theoretical approach that stresses the importance of "external selection," and Marvin Harris' to exemplify the theoretical approach that stresses the importance of "internal motivation," it identifies and critically evaluates apparent strengths and weaknesses of these respective approaches to evolutionary questions, as well as the merits of recent criticism and suggestions regarding them. It also identifies points of convergence and complementarity in resulting theories that suggest it may be useful to consider integrating or synthesizing these approaches into a more unified evolutionary perspective.

"Status in the world economy and the socioeconomic structure of nations" 1981.

Employing a measure of status in the world economy derived from a network analysis by Snyder and Kick (1979), this paper examines the effects of position in the world economy on four basic dimensions of socioeconomic structure and development: (1) income distribution, (2) level of economic development and rate of economic growth, (3) communication technology and distribution, and (4) sociodemographics. The consistent substantial relationship of the status measure with indicators of these dimensions is argued to support the validity of the network-based status measure, and by addressing and answering some major methodological criticisms recently raised (Weede 1980, Jackman 1980), the analysis also provides general support for some fundamental hypotheses derived from "world system/dependency" theories. The unsuspected importance of demographic processes in affecting rates of economic growth and development, however, indicate that much more theoretical emphasis and empirical research should be directed toward integrating political-economic features of the world economy with demographic features and processes in societies.

KORVETZ, John & Bruce MAYHEW. *"A structural theory of vertical mobility" 1980.*

This essay summarizes an inquiry that explores relations between the structure of stratification systems and the processes of vertical mobility. Illustration of these relations is confined to stratification in the distribution of wealth. The inquiry was directed to determining whether the structural properties of stratifi-

cation systems are sufficient to generate basic patterns in vertical mobility observed in empirical research, especially, the rank-distance effect (Svalastoga 1964). In particular, the question is whether these patterns can be generated even if movement is constrained by nothing more than the size of the population over which wealth is distributed and the total amount of wealth to be distributed. Our results show that the rank-distance effect emerges even under these minimal assumptions and, further, that rates and magnitude (distances) of vertical mobility are closely related to changes in these boundary parameters of a stratification system. The basic model developed to relate structure and mobility provides results that are highly consistent with many empirical observations. It also challenges existing claims concerning the nature of the mechanisms determining the relative status immobility of most people in large scale systems. The model implies that the way in which the structure of a stratification system constrains movement is by itself, sufficient to produce this result.

SHARP, John, Eui HANG SPIN and LeRoy SMITH. "A network analysis of departmental prestige based on the origins of faculty degrees." *BEHAVIORAL SCIENCE* 27:19. 1982.

This paper deals with networks of personnel recruitment at the organization level. A triad census and a CONCOR blocking algorithm are applied to a matrix of origin of Ph.D. by current employment for forty-eight selected graduate departments of sociology. The results reveal that conventional reputational (prestige) hierarchy models are of limited utility in describing the actual hiring practices of departments. Regional and specialty similarities influence the observed patterns greatly. These findings suggest that inter-organizational networks can be fruitfully investigated with many of the same theories and methodologies previously used only in the study of interpersonal networks.

AMINZADE, Ronald (Wisconsin) & Randy HODSON (Texas). "Social mobility in a mid-nineteenth century French City. 1982. *AMERICAN SOCIOLOGICAL REVIEW* 47: 441-57.

This paper explores changing patterns of class mobility in the city of Toulouse, France during the middle decades of the nineteenth century. Class categories are used to map out mobility patterns across locations in the social relations of production rather than across locations in status hierarchies. Data on patterns of intergenerational mobility derived from the marriage records of 1830 and 1872 are used to document the rigidity of class boundaries at different points in time, the sources of recruitment for newly emerging working-class positions, and the impact of changes in production relations upon the character and meaning of mobility patterns. Changes in mobility patterns are situated within the historical context of the changing social relations of production that marked the rise of early industrial capitalism. The final section of the paper provides some hypotheses regarding the impact of changing mobility patterns upon the process of class formation.

BARNES, Annie. "The black kinship system". *PHYLON* 42 (4): 369-380. 1981.

Research on black kin relations has focused primarily on the extended family in low-income and working-class communities. This paper reports a study of the kinship system of black middle-class families in Golden Tower, pseudonym for a Northwest Atlanta, Georgia neighborhood. An attempt is made to determine the influence of socio-economic factors on interaction in the kinship system, genealogical knowledge, and the respondents' knowledge of their antebellum ancestry.

BENIGER, James & Laina SAVORY (Princeton). "Social exchange: diffusion of a paradigm". *THE AMERICAN SOCIOLOGIST* 16: 240-250. 1981.

The paradigm of social theory and research known as "social exchange" is used to illustrate a methodology for the sociology of knowledge based on quantitative analysis of bibliographic compilations. This method is developed as an alternative to the structural study of theory qua theory groups pioneered by Mullins (1973). Mullins did not treat social exchange because he considered it only marginally different from structural-functionalism, and because it lacked in productivity as measured by publications. Since Mullin's study, however, the field has grown exponentially at a rate exceeding that of more established specialties while structural-functionalism has declined. Several characteristics of Mullins's theory groups do not hold for social exchange: it lacks centers for training students, spans national boundaries, and is based in peripheral as well as major departments. Its intellectual history begins with several major books rather than

articles, publication has concentrated in a few nonspecialty journals in several disciplines, and coauthorship is uncommon. These characteristics suggest that structuralist methods may overlook single-model theories and more general paradigms that span several disciplines, and that alternative approaches to the sociology of knowledge are needed.

BEZILLA, Robert. (Gallup Org.). "The limits and possibilities of computer-based conferencing systems for the developing countries." *COMPUTER SCIENCES AND INFORMATICS* 12 (1): 21-27. 1982.

The Universal Postal Union, founded as recently as 1874, created the necessary climate for a phenomenal growth in international mail. A century later, computer based conferencing systems (CBCS) are at the same turning point. Development of international conferencing needs to be promoted by eliminating a variety of hurdles that make it difficult today. But one has to be careful to avoid a domination of the weaker nations by the more powerful ones which are well advanced in computer technology. CBCS offer many facilities to resource poor groups in the developing world, facilitating optimum utilisation of resources and manpower. The limits and possibilities for the use of CBCS in developing countries are discussed.

BERKMAN, Lisa. "Physical health and the social environment: A social epidemiological perspective." Pp. 51-57 in L. Eisenberg & A. Kleinman, eds., *THE RELEVANCE OF SOCIAL SCIENCE FOR MEDICINE*. Dordrecht, Holland: D. Reidel. 1980.

Several examples of the ways in which the social environment may have an impact on health status are presented. A serious concern in regard to the relationship between socio-environmental variables and health status is the mechanism(s) by which such environmental variables are linked to actual pathological/disease processes. Although there is not much evidence currently about such causal pathways, it is important to be assured that such potential pathways do exist. (Finally I discuss) how factors in the social environment might fit with several models of social intervention which may lend themselves quite easily to preventive efforts.

BERNEY, Pierre, Jean-Raymond FRADIN & Jean-Jacques RONSAC (IAURIF). "Habitat-emploi et transport: une nouvelle approche--les zones de solidarité en région d'Ile-de-France." *CAHIERS DE L'INSTITUT D'AMENAGEMENT ET D'URBANISME DE LA REGION D'ILE-DE-FRANCE*, #66 (Oct.): 49-71. 1982.

Des méthodes d'approche originales permettent de découvrir, (au delà des mécanismes de fonctionnement bien connus de la région d'Ile-de-France: déséquilibres habitat-emploi entre le centre et la périphérie aussi bien qu'entre l'est et l'ouest, prédominance, des déplacements radiaux), l'existence d'une structure régionale formée de sous-ensembles urbains, groupes de communes baptisés--zones de solidarité--fondés principalement sur les relations entre lieu d'habitat et lieu d'emploi.

Cette notion de zone de solidarité pourrait bien être utilisée dans le cadre d'une politique d'aménagement régional. En particulier, les auteurs proposent ici de privilégier l'échelon de la zone de solidarité comme niveau pertinent d'appréhension des déséquilibres habitat-emploi, ainsi que comme élément de base des actions à entreprendre, d'une part en matière de transports, d'autre part en matière de localisation de l'emploi.

BOJE, David M. & David A. WHETTEN. "Effects of organizational strategies and contextual constraints on centrality and attributions of influence in interorganizational networks." *ADMINISTRATIVE SCIENCE QUARTERLY* 26: 378-395. 1981.

This study examines the effects of organizational strategies and contextual constraints on location in interorganizational transaction networks and the effects of strategies, constraints, and network position on attributions of influence. A model of these effects is presented, and eleven propositions specific to social service organizations are examined. In client referral networks in 17 communities, it was found that centrality in referral flow, in communication exchanges, and in joint program activities was positively associated with attributions of influence. A revised model is tested using path analysis.

BONNETT, Aubrey, W. "Structured adaptation of black migrants from the Caribbean: an examination of an indigenous banking system in Brooklyn." *PHYLON* 42 (4): 346-355. 1981.

Rotating credit associations among black immigrants in New York City have existed for at least fifty years. Among West Indian blacks their use is surrounded with a certain ambivalence. Some have commented on the manner in which they have been used to help some West Indian immigrants validate their middle-class aspirations through initial down payments on homes, purchase of businesses, etc. However, others have seen them as a relic of the past, an anachronistic institution that would surely disappear with the passage of time, especially in a highly urbanized, impersonal environment. The author's position is that these associations are used by immigrants as a generational adaptive mechanism to cope with the urban complexities of New York. Consequently, he believes their use is important among first-generation immigrants but less so among the second generation.

BRASS, Daniel J. "Structural relationships, job characteristics, and worker satisfaction and performance." *ADMINISTRATIVE SCIENCE QUARTERLY* 26: 331-348. 1981.

This research investigates the role of job characteristics as possible mediating variables in the relationships between the organization's structural context and the attitudes and behaviors of individual employees. The organization is conceptualized as a network of task positions interrelated on the basis of workflow transaction. Three structural relationships of task positions are investigated: the centrality of a task position; the degree to which a task position is critical to the overflow; the transaction alternatives available to a task position. The results indicate significant relationships between these three relational measures and job characteristics. Further, the findings support the hypothesis that job characteristics mediate the relationship between structure and individual responses.

BRINBERG, David (Maryland) & Pat CASTELL (Maryland). "A resource exchange theory approach to interpersonal interactions: a test of Foa's theory." *JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY* 43 (2): 260-269. 1982.

Foa's theory of resource exchange was used to examine the types and patterns of exchanges involved in interpersonal interactions. Two judgment tasks were used to test both the functional and structural aspects of this theory. The dimensions of particularism and concreteness were hypothesized to underlie the six resource categories of love, status, information, money, goods, and services. In addition, resources perceived to be in the same category were hypothesized to be exchanged with a higher probability than resources in different categories. Support for both the structural and the functional relations among the resource categories was not consistent with the initial classification of the behaviors used to represent the six resource categories but was consistent with the meaning associated with the behaviors. The implications of these findings for Foa's theory as well as for research dealing with interpersonal exchanges are discussed.

BRUGHA, T., R. CONROY, N. WALSH, W. DELANEY, J. O'HANLON, E. DONDERO, L. DALY, N. HICKEY & G. BOURKE. "Social networks, attachments and support in minor affective disorders: a replication." *BRIT. J. PSYCHIAT.* 141: 249-255. 1982.

Significant deficiencies in personal social networks and social support in non-psychotic psychiatric out-patients have been reported by Henderson and his colleagues. In a replication study, 50 non-psychotic psychiatric out-patients were compared with 50 matched controls. Patients reported spending less time in social interaction, but more time in unpleasant interaction during the previous week; they also had fewer attachment figures, close relatives and good friends and fewer social contacts than controls. However, the separate analysis of neurotic and retarded depressives failed to replicate all these findings in the retarded depressives. It is concluded that these associations are confirmed in neurotic patients, but that the more severe depressive disorders require further investigation.

BUNTING, David. "Origins of the American corporate network." *SOCIAL SCIENCE HISTORY* 7 (Spring) 1983.

The interlocking and network relationships of large U.S. banks, insurances and railroads are examined for the years of 1816, 1836, 1871, 1891, and 1912 with the general conclusion that interlocking and highly developed corporate networks have existed from earliest times. This finding implies that the American corporate network probably is not related to some particular stage of industrial development in that the years selected include both pre- and advanced capitalistic periods.

BUNTING, David & Mark S. MIZRUCHI. "The transfer of control in large corporations: 1905-1919." *JOURNAL OF ECONOMIC ISSUES* 16 (Dec): 985-103. 1982.

We examine the evolution of control in large corporations before 1920 and find managers typically succeeded "finance capitalists" rather than shareowners. We identify finance capitalists as heavily interlocked directors and how they created networks of formal relationships among large companies to resolve conflicts and establish commonality. Because of harassment, legislation, death and retirement, finance capitalists declined in influence after 1912. Their power transferred by default to various subordinate managers who had been responsible for particular companies. However, we find the previously created networks of intercorporate relationships persisted, virtually unchanged. We conclude that specific firms are inappropriate units for corporate analysis.

BURT, Ronald (Columbia). "Spatial models of community leadership." In Terry Clark, ed., *URBAN POLICY ANALYSIS*. Beverly Hills Sage. 1981.

"Burt emphasizes the similarities between network analysis and spatial modeling. These two traditions, he argues, should be joined to create a more balanced approach to understanding how policy is formed." (from William Anderson, Jr.'s review in *CONTEMPORARY SOCIOLOGY*, 11/82).

CAMPBELL, Doug (Toronto). "A group, a network and the winning of church Union in Canada: a case study."

The United Church of Canada was born in 1925 out of a struggle which lasted almost a quarter of a century. This paper is a case study which focuses on the dominant unionist leadership and its use of power in this struggle. First there was a group of men who developed a perspective on their society during the early part of their careers and, upon the disintegration of the group, they maintained a social network which had as its goal the merger of the Presbyterian Church in Canada with the Congregational Church and the Methodist Church. This goal was achieved despite the well-organized and sustained opposition within the Presbyterian Church in Canada to the proposed union.

CANCIAN, Francesca (Irvine) & Margaret DAVIS (SRI International). "Social structure and situations: the effects of roles, actions, and situations on interpersonal perception." *SOCIOLOGICAL INQUIRY* 51 (2): 105-111. 1982.

This study examines the structural and situational approaches to social action by analyzing the effects of roles, action, and situations on people's perceptions of others. College students were given questionnaires containing short descriptions of interaction between an adult and an adolescent boy. These questionnaires were designed to examine the effects of roles (male-female and employer-parent), actions, and several concrete situations on two dependent variables: (1) behavior predictions for the adult in each hypothetical situation, and (2) ratings of the adults on expressive and instrumental attributes. The results support both structural and situational approaches. The parent role has a strong effect on how the adults are predicted to behave and the situation has little effect. But the respondents' rating of the adults is determined primarily by actions not roles.

CARNEVALE, Peter, Dean G. PRUITT & Patricia CARRINGTON (Buffalo). "Effects of future dependence, liking, and repeated requests for help on helping behavior." *SOCIAL PSYCHOLOGY QUARTERLY* 45 (1) 9-14. 1982.

The joint effect on helping behavior of liking and dependence on another for future rewards was examined. It was hypothesized that future dependence produces more helping behavior hypothesis was derived from the Pruitt and Kimmel (1977) goal/expectation theory, a theory developed to interpret certain findings about cooperation in the prisoner's dilemma game. The hypothesis was supported. For people who liked one another, future dependence led to more time spent helping and a greater amount of help than no future dependence. For people who disliked one another, helping was low regardless of the extent of future dependence. In addition, the amount of help given the other increased across trials only for those subjects who were dependent on the other for later help. The Pruitt and Kimmel theory explains the low level of helping in the conditions where the other was disliked as due to a lack of trust that the other would reciprocate.

CAULKINS, Douglas. "Community, subculture, and organizational networks in Western Norway." *JOURNAL OF VOLUNTARY ACTION RESEARCH* 9:

During the past five years there has been a resurgence of interest in the study of community social structure. Perhaps the greatest stimulus to the renewal of interests in the community as a unit has been the rapid development of techniques for the analysis of social networks, including interorganizational networks formed by overlapping leadership or some other form of exchange relationship among organizations.

The purpose of this paper is to describe several models of community social structure, trace their implications for interorganizational networks formed by overlapping leadership, and to test hypotheses derived from each of these models using data from a survey of 80 formal voluntary organizations in a small coastal town in Western Norway. An examination of this interorganizational network will reveal important areas of cohesion and lines of division in the community.

COHEN, Carl I. & Henry RAJKOWSKI. "What's in a friend? Substantive and theoretical issues." *THE GERONTOLOGIST* 22 (3): 261-266. 1982.

This paper has two goals: one is to enrich our conceptualization of friendship, a key variable within gerontological theory; and the second goal is to illustrate an approach for researchers and clinicians alike to more successfully confront some of the limitations posed by the current usage of the concept of friend. In this paper we demonstrate how much of the literature has been characterized by conceptualizations that rely on superficial appearances, "abstract generalities", normative models, and a priori categorizations. The second goal is addressed in the following manner: Based on data derived from aged residents of single-room occupancy hotels, we (a) ascertain whether so-called universal norms of friendship obtain for the population, (b) illustrate how a theory of friendship based on social relations can provide a general framework that can simultaneously explicate friendship for particular population groups as well as for the singular individual within the group, and (c) demonstrate how a relational theory of friendship can redefine and elaborate upon trait ascriptions of friendships such as age or geographical location.

COHN, Samuel. "Michael Hecter's theory of regional underdevelopment: a test using Victorian railways." *ASR* 47: 477-488. 1982.

Hecter's theory of the role of cultural differences in explaining the underdevelopment of peripheral regions within nation states argues that, net of their true economic viability, peripheral regions suffer undercapitalization. This is because core investors are prejudiced against investing in peripheral areas. To test this theory, one industry, Victorian railways, was selected. An econometric model of country railway mileage was constructed to represent the expected location of railways under a regime of market rationality. The residuals from the model were then examined to see if peripheral areas receive disproportionately smaller railway nets. The findings suggest that at best there is a very small peripheral handicap that is confounded with the effects of terrain. Overall, a simple economic model is not substantially improved upon by the inclusion of cultural differentiation. A plea is made for alternative specifications of the mechanisms of internal colonialism.

COQUERY-VIDROVITCH, Catherine (Geog., Paris VII). "Les structures du pouvoir et la communauté rurale pré-coloniale." *CANADIAN JOURNAL OF AFRICAN STUDIES* 15 (3): 433-449. 1981.

Power is analysed from the perspective of the rural community; the village, when it exists; the lineage, or the fraction thereof; or, most often, the household. In Black Africa, this central core of production and subsistence never was an autarchic entity but rather was linked to the outside in three different ways:

- first, through lineage relations, based on family ties.
- second, through formal political links or the recognition of a state and territorial authority (even if the state appeared to overlay other authority and if, at the village level, the state was present almost exclusively in the form of coercion);
- and third, through personal ties, which reinforced or opposed the two preceding forms of relations through networks of exchange and responsibility, either horizontal (from lineage to lineage or from village to village) or vertical (from the village to superior authority, sometimes passing through intermediate levels).

Family ties, territorial authority, personal obligations: the complex workings of these three variables suggests the flexibility of the entire system of power, of which one finds in Africa multiple variations, ranging from the so-called "stateless" lineage societies to highly structured political formations.

DAVENPORT, Judith & Joseph DAVENPORT III (Wyoming). "Utilizing the social network in rural communities." *SOCIAL CASEWORK* 63 (2): 106. 1982.

The concept of social network appears to be gaining in acceptance, understanding, and applicability in social work circles. Although this concept is germane to the profession in general, some practitioners believe that it is of greater importance to social work in rural areas. This article provides an overview of the concept, discussing its applicability in rural areas and making recommendations for social work and social work education.

D'AUGELLI, Anthony & Theodore R. VALLANCE (Penn St.) "The helping community: issues in the evaluation of a preventive intervention to promote informal helping." *JOURNAL OF COMMUNITY PSYCHOLOGY* 10 (July): 199-209. 1982.

This report addresses conceptual and practical problems in evaluating the effectiveness of an intervention which used a pyramid training model for improving helping skills for informal helpers in two rural communities. Against a background for a study of help-giving and help-seeking patterns, the transmission of helping skills from professional to community trainers to local helpers was studied. Impacts of the intervention on other aspects of the community are reported.

DAVIS, Edward. "Regional networks and social change: the evolution of urban leadership in the northern anthracite coal region, 1840-1880." *JOURNAL OF SOCIAL HISTORY* 16 (1): 97. 1982.

The impact of participation in regional, social and economic networks has been largely ignored in previous analyses of leadership. This study examines leadership groups in the northern anthracite coal region of northeastern Pennsylvania from 1840 through 1880. Specifically, it will demonstrate that the institutions and kinship system of the upper class in Wilkes-Barre, the dominant city in the region, formed the basis of the broader social and economic networks that encompassed all leadership groups in the region and gave the urban system its cohesiveness.

DELGADO, Melvin & Denise HUMM-DELGADO (Boston). "Natural support systems: source of strength in Hispanic communities." *SOCIAL WORK* 27 (1): 83. 1982.

Literature on human services is beginning to focus on the important role of natural support systems in assisting individuals in crisis and on the potential impact these systems have on the utilization of services and the development of programs. Examination of the natural support systems in Hispanic communities reveals an inherent source of strength for individuals that can be explored as resources in the development culture-specific counseling or in the development of service plans, programs, and policies. Failure to explore these resources may result in an under-utilization of services.

This article will define natural support systems, describe four types of natural support systems found in Hispanic communities, and analyze these systems with implications for direct services, planning, and social welfare policy. Although this article relates to Hispanics in general, many of the specific examples are drawn from the Puerto Rican community.

DISBROW, Mildred & Hans DOERR (Nursing, U of Washington). "Measures to predict child abuse: a validation study." *Final report to the maternal & child health & crippled children's services research grants program, US Dept. of Health & Human Services.* 1982.

This was a four year longitudinal study conducted for the purpose of validating a predictive battery of measures assembled and tested with known child abusers and matched controls in the developmental stage of the research (1974-76). Subjects comprising 551 families, recruited at or before the birth of their infants, were screened when infants were 1-2 months old. Of these, 200 families, stratified on risk for malparenting and family prestige, were selected and tested at 6-8, 16-18, and 28-30 months. Data were produced through

questionnaires, interviews, videotapes and physiological measurement. The independent variables were parents' background, personality, child rearing attitudes, antecedents to early attachment, life changes, social network resources, parent-child interaction and physiological response to child related behavior. The dependent variable was malparenting, one indicator of which was harsh handling of the children. Data were analyzed using descriptive and inferential, univariate and multivariate statistical methods. A higher percentage of the single parents, teenagers, racial minorities, non high school graduates and parents with low family prestige were found in the high malparenting group than in the low. Risk, harsh handling of children and malparenting differed significantly by family prestige and parental education but not by sex of parent. Prediction of harsh handling of children, based on the risk scores, showed 70% of cases correctly classified with sensitivity of 63% and 64% specificity while prediction of malparenting showed 66% correct classification of cases, a sensitivity of 59% and specificity of 69%.

DOVIDIO, John F. & Samuel L. GAERTNER. "The effects of race, status and ability on helping behavior." *SOCIAL PSYCHOLOGY QUARTERLY* 44 (3): 192-203. 1981.

Protests by whites against affirmative action focus on the concern that qualified whites will be subordinated to less qualified blacks. To examine the possibility that the reversal of the traditional status relationship rather than competence inequity underlies resistance to affirmative action, a study of prosocial behavior was conducted in which 96 white males interacted with a black or white male who was introduced as either their supervisor or subordinate and as either higher or lower in cognitive ability than themselves. The findings indicate that status, not ability, influences the frequency of helping blacks, whereas ability, not status, primarily influences behavior toward whites. Specifically, black subordinates were favored relative to black supervisors, regardless of ability, and high ability whites elicited more help than low ability whites. Subsequent ratings revealed that subjects evaluated even high ability blacks as less competent than themselves while they acknowledged the greater competence of high ability whites.

DOWD, James (Georgia) & Ralph LaROSSA (Georgia State). "Primary group contact and elderly morale: an exchange/power analysis." *SOCIOLOGY AND SOCIAL RESEARCH* 66 (2): 184. 1982.

Using a sample of 757 middle-aged and older residents of the Atlanta metropolitan region, the relationship between primary group contact and morale was investigated. Controlling on sex and dependency, it was found that interaction with children had a negative impact on the morale of dependent, older males. This finding was explained in terms of the power-dependence relationships that exist within the family. It was argued that visits with children and grandchildren are perceived by the dependent older male as a drama in which the ascending generations legitimate their claims to leadership through a gradual process of situation redefinition. One manifest result of having to cede control to his middle-aged offspring is lower morale.

EITZEN, D. Stanley (Colorado), Maureen JUNG (Cal-Santa Barbara) & Dean PURDY (Bowling Green State). "Organizational linkages among the inner group of capitalist class." *SOCIOLOGICAL FOCUS* 15 (3): 179. 1982.

This study investigates the non-corporate organizational linkages among the inner group of the capitalist class, defined as those who are interlocked with three or more corporations. To the extent that persons already linked through corporate ties also are connected through common memberships in business organizations, social clubs, and other voluntary organizations, the likelihood of a national cohesive power elite is increased. The corporate data used are from the 1976 government study of the 130 major companies in the United States, controlling collectively 25 percent of all assets. The biographical data on the 66 individuals found to sit on three or more boards among these 130 companies were taken from Who's Who. Several key organizations were found where the members of the elite were especially interconnected. A cluster of 15 individuals with 13 or more common memberships within the 66 were identified as having the greatest linkages. The analysis of the number of common links for each possible pair among these 15 individuals revealed an average of 2.76. Moreover, one-third of the 15 had four links or more, with at least five persons among this inner circle, revealing the nucleus of the inner group. These data show that there is a social network, national in scope, which provides a basis for unity among leaders of the capitalist class.

FELD, Scott (SUNY). "Social structural determinants of similarity among associates." *ASR* 47: 797-801. 1982.

This paper shows how the social structuring of activity leads people to develop relationships with others who are similar to themselves. Most relationships originate in foci of activity that bring together disproportionately homogeneous sets of people. The more homogeneous these sets of people are, the more relationships tend to be with similar others. A sample survey and a study of friendships in one large factory illustrate the importance of the social structuring of activity for age similarity. It is suggested that the neglect of structural factors has led to the overestimation of the extent to which people "prefer" to associate with similar others.

FINE, Marlene. "Soap opera conversations: the talk that binds." *JOURNAL OF COMMUNICATIONS* __: 97-107. 1981.

Although same-sex relationships on the soaps are similar to those in everyday life, the preponderance of male-female relationships and the intimacy of the conversations seem unlike the daily patterns of social interaction. Who talks to whom in the world of soap operas, and what do they talk about?

FIX, Alan (Cal-Riverside). "Kin-structured migration and the rate of advance of an advantageous gene." *AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY* 55: 433-442. 1981.

Hemoglobin E, an allele generally considered to confer malarial resistance in heterozygotes, is found in high frequencies across a wide area of Southeast Asia. Apparently it originated as a single-point mutation which was spread by gene flow. The rate of diffusion of this adaptive allele is studied using four computer simulation models. It is shown that in small populations deterministic equations for gene flow may overestimate rates of diffusion. Other aspects of population structure, however, such as kin-structuring of migrant groups, increase the rate of advance. Finally, population growth coupled with the spread of the allele leads to much more rapid diffusion. These results suggest that population structure can be an important factor affecting the diffusion of advantageous genes.

FRANTZ, Charles. "Development without communities: social fields, networks, and action in the Mambila grasslands of Nigeria." *HUMAN ORGANIZATION* 40 (3): 211-220. 1981.

The idea that a community is integral to "community development" is widespread, whether the community is local, regional, or national. Analysis of development in Mambila District, Gongola State, Nigeria, indicates that communities, territorially conceived, as well as supralocal administrative systems, are relatively unimportant. Rather, developmental changes during the last century have mainly resulted from the extension and intensification of market exchange; interethnic conquest, marriage, and fosterage; the growth of patron-client bonds; and the spread of Western and Middle Eastern secular and religious ideas and practices. Such concepts as "social field" and "network" allow a clearer understanding of how development may occur than does a focus on "communities."

FRIEDKIN, Noah (Cal-Santa Barbara) & Charles BIDWELL (Chicago). "The policy groups of organizations: composition, cohesion, and consensus." *MIMEO*. 1982.

The paper focuses on groups whose members influence policies of the supreme authorities of organizations. Our aim is to show how variation in the composition and network cohesion of such groups affect the probability of policy agreement in them. We find that agreement between two policy group members is more likely the more cohesive the network in which they are involved, regardless of the compositional attributes of the two members, composition has negligible direct effects on agreement, and composition has indirect effects on agreement through its effects on network cohesion. Our findings suggest that the principle of homophily is of limited use in accounting for the distribution of agreement in policy groups. We point to mechanisms that foster boundary spanning network cohesion and diminish the direct effects of composition on policy agreement in the policy groups of organizations.

GADEWAR, A.U., Z.D. KAVIA & M.S. PRASAD (Central Arid Zone Research Institute, Rajasthan). "Communication behaviour among small farmers in an arid village of Western Rajasthan." *EASTERN ANTHROPOLOGIST* 35 (2): 143-146.

The importance of communication has been realised after the introduction of high yielding varieties. Researches conducted in some of the states have rightly pointed out the importance of communication to reach the developmental message to farm community through interpersonal and mass media communication. Efforts are being made to develop the communication ability of small farmers through various developmental programmes such as SFDA and IRD initiated for the benefit of the small and marginal farmers. It was, therefore, felt necessary to study the communication behaviour of small farmers among them and suggest some ways and means to build up the communication ability.

GALASKIEWICZ, Joseph (Soc, Minn) & Deborah SHATIN. "Leadership and networking among neighborhood human service organizations." *ADMINISTRATIVE SCIENCE QUARTERLY* 26: 434-448. 1981.

This study investigated the hypothesis that under conditions of environmental uncertainty, leaders of neighborhood human service organizations would establish cooperative relations on the basis of their own personal connections in the neighborhood or their status group affiliations. Data on the cooperative working relationships among 181 human service public and private nonprofit organizations were examined in four Chicago neighborhoods. In all four neighborhoods, organizations whose leaders had common organizational memberships tended to have cooperative ties with one another. However, in more turbulent areas, public and private organizations whose leaders had a similar racial or educational background were more likely to establish cooperative relationships with one another.

GALLAGHER, Dolores E. (Palo Alto U.A. Hosp.), Larry W. THOMPSON & James PETERSON (Southern Cal). "Psychosocial factors affecting adaptation to bereavement in the elderly." *INT'L J. AGING AND HUMAN DEVELOPMENT* 14 (2): 75-95. 1981-82.

A spouse's death requires more readjustment on the part of the bereaved than any other stressful life event. This finding holds across the many age groups and cultural backgrounds that have been studied. Although it is unclear as to whether the stress of bereavement is greater for women than for men, for the young than for the old, for one socioeconomic level or for another, a critical review of the literature suggests the following: Negative changes in physical health, mortality rate and mental health status usually accompany widowhood. Complex social-psychological variables such as the individual's characteristic ways of coping with stress (coping strength), the adequacy of the social network - plus other factors such as income and religious commitment - may attenuate widowhood's negative impact. Suggestions for further research include studies exploring differential adaptation to widowhood across age groups and in elderly men and women, and longitudinal studies tracing the process of recovery from acute grief.

GOGEL, Robert & Thomas KOENIG (Northeastern). "Commercial banks, interlocking directorates and economic power: an analysis of the primary metals industry." *SOCIAL PROBLEMS* 29 (2): 116-128. 1981.

This paper addresses the issues of corporate control and bank power by analyzing relations between commercial banks and firms in the primary metals industry. We construct three models of corporate control: management control, single bank control, and collective bank control. We test the validity of these models for the primary metals industry by comparing frequencies and distributions of bank-corporate interlocks and bank-trust department stockholdings; relationships between bank interlocks and measures of relative short-term debt and dividend payout rate. Our results support none of the models fully but lend partial support to the collective bank-control model. Two additional approaches to the study of economic power - the resource dependence perspective and the class cohesion perspective - are then discussed and suggestions made for further research.

GORT, Michael & Akira KONAKAYAMA. "A model of diffusion in the production of an innovation." *AMERICAN ECONOMIC REVIEW* 72 (Dec): 1111-1120. 1982.

This paper is an attempt to explain the process of diffusion in the production of an innovation. Diffusion in *production* is defined as the increase in number of producers, or net entry, in the market for a new product. It is to be distinguished from the more familiar problem in the literature on technical change, namely, the diffusion among producers in the *use* of new products and, hence, of changes in production processes for "old" products (or services). We develop our method of diffusion and, test it with data for seven product innovations: DDT, lasers, nylon, penicillin, streptomycin, styrene, and transistors.

HAIGHT, Timothy, Robert RUBINYI & Anna Lucia ZORNOSA. 1982? "Use of computer and communication technologies by grass-roots community organizations." *Research paper, Communications Arts Dept. U of Wisconsin.*

Based on a survey, this is 1 of the 1st analyses of the uses of computers among citizen action and community-based organizations.

HALPERN, Jonathan (Technion) Efstratios SARISAMLIS (Salonika) & Yair WAND (Technion). "An activity network approach for the analysis of manning policies in firefighting operations." *MANAGEMENT SCIENCE* 28 (10): 1121-1136. 1982.

This paper presents a semi-empirical method for the analysis of manning policies in firefighting. Since manpower costs account for a major share of non-volunteer fire departments' budgets, manning level is one of the most important policy issues relating to fire departments faced by local government decision makers. Yet, practically no analytic research of manning levels has been previously carried out. The method described in this paper uses an activity network approach to describe fireground command operations and a structured interview to obtain data. The technique was used to analyze the effect of manning level in one- and two-family residential fires in the city of Calgary. A series of structured interviews with fire department officers generated data concerning precedence relations among activities, their durations, and their manpower requirements. These were used to establish a relationship between manning levels and time needed to extinguish the fire. The analysis indicated that there is a limit on manning level above which only marginal improvement can be obtained. Also, the effect of an additional firefighter depends on the existing manning level. The results presented here are of a preliminary nature. However, they seem to lend credibility to the technique. In addition, we discuss some qualitative conclusions and other possible uses of the method.

HAMMER, Muriel (NYS Psychiatric Inst.) "Social supports, social networks, and schizophrenia." *SCHIZOPHRENIA BULLETIN* 7(1): 45-57. 1981.

This article considers the meaning of "social support" and its relationship to social networks, and discusses a structural approach to analysis of social connections in the study of schizophrenia. The concept of social supports is seen as methodologically more problematic and less strategic than the more connotatively neutral and more structurally oriented concepts of social networks and social connections. It is argued that in terms of research strategy, if social connections are studied structurally as they change and develop over time, the impact of the specifically *social* processes can be better separated from that of the personal characteristics of the focal individual than seems possible with other approaches. Analysis of the properties of the networks around the focal individual, independently of that individual's own social behavior, can help to disentangle the interwoven complex of causes, characteristics, and consequences of schizophrenia.

HELD, Linda. "Self-esteem and social network of the young pregnant teenager." *ADOLESCENCE*, 16 (64): 505-512. 1981.

This study is concerned with self-esteem and social networks of 62 Houston women, 17 years of age and younger, who were in their third trimester of pregnancy. Self-esteem was assessed by administration of the Coopersmith self-esteem inventory; social network information was sought by asking the adolescent to rate her perceptions of reactions to the pregnancy by significant others; she then was asked to rank these people in order of their importance to her. Future plans were also surveyed.

HODSON, Randy & Robert KAUFMAN (Texas). "Economic dualism: a critical review." *ASR* 47: 727-739. 1982.

In this paper we examine the model underlying the dual economy approach to labor market segmentation. We provide a specification of the components of the model as well as the linkages between components. This construction of the underlying model allows us to evaluate it systematically as a model, to consider and to evaluate each component and linkage separately. While we conclude that there are several important contributions to retain from the dual approach, including the insight that capital structure conditions labor market outcomes, we argue that it is inadequate for sustaining theoretical and empirical development. As a new starting point for the study of economic and labor market segmentation we suggest a resource perspective which retains insights from the dual approach but avoids its overly restrictive assumptions.

JENKINS, J. Craig (Missouri). "Why do peasants rebel? Structural and historical theories of modern peasant rebellions." *AMERICAN JOURNAL OF SOCIOLOGY* 88 (3): 487-514. 1982.

Recent analyses of the sources of 20th-century peasant rebellions have centered on two basic theories: a structural theory of class relations that points to the greater political volatility of smallholder tenancy and a historical theory pointing to the strength of traditional village institutions in the midst of the increasing economic insecurity of the peasantry brought about by the expansion of the market economy, increased exactions by landowners and the state, and the pressure of rapid population growth. These theories are evaluated against the experience of the large-scale rebellions that occurred throughout the Russian Empire in 1905-7. Although the historical record provides preliminary support for both theories, regression analysis of the links between provincial socioeconomic patterns and the incidence of the rebellions disconfirms the structural theory and corroborates the basic propositions of the historical theory. Peasants rebel because of threats to their access to an economic subsistence, not because of the particular form of class relations in which they are enmeshed.

JENKINS, Lowell & Alicia COOK (Colorado State). "The rural hospice: integrating formal and informal helping systems." *SOCIAL WORK* 26: 408-413. 1981.

Helping services frequently take on different forms in rural communities. The implementation of the hospice philosophy in rural areas provides a model of how formal helping systems and natural helping networks can work together effectively.

JOHNSON, Michael (Pennsylvania State) & Leigh LESLIE (Fordham). "Couple Involvement and network structure: a test of the dyadic withdrawal hypothesis." *SOCIAL PSYCHOLOGY* 45 (1): 34-43. 1982.

A number of theorists have argued that increased romantic involvement of a couple with each other necessarily leads to decreased involvement with other members of their social network. A critical analysis of those arguments suggests that the withdrawal process is socially defined rather than existentially necessary, and selective rather than universal. Data are presented on network structure for a sample of 419 university students involved in relationships ranging from occasional dating through marriage. The results indicate that as couples become more romantically involved, their friendship networks shrink and they become less involved with those friends who remain in the network. Kin networks do not shrink, although the variance in number of kin listed increases dramatically at engagement and again at marriage. Results are discussed in terms of the interpersonal construction of definitions of relationships and the networks in which they are embedded.

LAROCCO, James, James HOUSE & John FRENCH, Jr. (Michigan). "Social support, occupational stress, and health." *JOURNAL OF HEALTH AND SOCIAL BEHAVIOR* 21: 202-218. 1980.

The present paper is concerned with the buffering hypothesis that social support ameliorates the impact of occupational stress on job-related strain and health. Previous studies of this hypothesis have yielded conflicting results. Our purpose, therefore, is twofold. First, we summarize the literature in this area and review several studies in detail, all of which found main effects of social support on perceived occupational stress and on some health outcome measures. Three of the studies were specifically designed to examine the buffering effects of support. Of the three, two found little or no evidence for buffering (LaRocco and Jones, 1978a; Pinneau, 1975), whereas the third reported buffering effects (House and Wells, 1978). Second, we attempt to reconcile these different conclusions by reanalyzing one data set - first analyzed by Caplan et al. (1975) and then by Pinneau (1975) - using a moderated regression technique identical to that used in the LaRocco and Jones and House and Wells studies. The data used for this analysis consist of a randomly stratified sample of men from 23 occupations (N = 636). Our review and findings support the buffering hypothesis for mental and physical health variables (anxiety, depression, irritation, and somatic symptoms), but, as in the previous three studies, fail to support the buffering hypothesis in regard to job-related strains (job dissatisfaction, boredom, dissatisfaction with work load).

LAUTMAN, Jacques. "Pour une théorie de la localité." *CAHIERS INTERNATIONAUX DE SOCIOLOGIE* 71 (numéro spécial): 322-28.

Community studies have a long tradition but have been criticized on several grounds and suffered a decline after the mid '60s. However, local involvements do affect social relations and self-identity of persons and

groups. Social networks enjoy a revival of interest. Therefore 2 questions are raised: is it possible to give a scientific status to the local specification of social division? Would it be possible to come to a better linkage between local social structure, local identity and local power?

LEAVY, Richard (Ohio Wesleyan). *"Social support and psychological disorder: a review."* 3-21, 1983.

With the rapid growth in the literature on social support and psychological disorder, a review of the area is in order. The present article describes current conceptualizations of social support, and presents a distillation of empirical evidence on the relationships among stress, social support, and psychological disorder. The structure of support links and the quality of the relationships they provide appear to be associated with a range of mental health issues. Methodological problems with current research are assessed, and suggestions for appropriate design and conceptualization are offered.

LI, Peter. *"Chinese immigrants on the Canadian prairie, 1910-47."* CANADIAN REVIEW OF SOCIOLOGY AND ANTHROPOLOGY 12 (4): 526-540. 1982.

This paper examines the job histories of a group of first-generation Chinese immigrants who have been living in Canada from 50 to 70 years. The study focuses on the working experience of the Chinese prior to and during the exclusion era between 1923 and 1947, when they were barred from immigrating to Canada. The purpose of the analysis is to draw some general conclusions about the economic survival of an ethnic minority which has historically encountered severe discrimination and other structural barriers. The use of case histories in this study provides detailed insights into the organization of the working world of an immigrant group, and its incorporation into the Canadian economy.

LOMNITZ, Larissa (Mexico). *"Horizontal and vertical relations and the social structure of urban Mexico."* LATIN AMERICAN RESEARCH REVIEW 12 (2): 51-74. 1982.

The social structure of Mexico has been likened to a set of free-standing pyramids, each of which duplicates itself hierarchically like a crystal from top to bottom. Probably, such a metaphor can be reconciled with class analysis, though doubts have been expressed on this subject. It will be suggested here that such a pervasive structural image may reflect the pattern of horizontal and vertical social relations at the interpersonal level. In other words, this metaphor is as much a part of Mexican political culture as is the stratified class model of European political culture. It elicits responses of loyalty, competition, and patterns of exchange. It is a cultural fact of Mexico.

Following a commonly used terminology, I shall define tentatively the following pyramids or "sectors" of the social structure of urban Mexico: (1) the public sector, or state apparatus, including the administrative bureaucracy and the state-owned or state-operated industries and concerns; (2) the labor sector, or organized industrial proletariat; (3) the private sector, which includes the national bourgeoisie, their allies, clients and employees, private business and the independent liberal professions under their respective charters; and (4) the informal or marginal sector, which amounts to about 40 percent of the labor force in the cities, and which includes all those which are not comprised in the three "formal" sectors. They are underemployed, self-employed, or informally employed workers without job stability, social security, fringe benefits, minimum wage guarantees, bargaining power, or nationwide organization.

The flow of resources within the system is determined by the interaction of three variables: the direction of the relationship (horizontal or vertical), the kind of resource exchanged (capital, power, labor, information, political loyalty), and the mode of articulation (formal or informal). The first variable generates the basic pyramid pattern of the structure; the second variable accounts for the existence of specialized sectors handling different kinds of resources; and the third variable explains the basic distinction between the formal and informal segments of urban society.

"Fearmongering and symbol confusion as mechanisms for ideological control: the case of the 'porros' at the National University of Mexico." 1982.

Delinquent youth gangs have become a standard problem of modern cities. In this paper I discuss a peculiar urban phenomenon of modern Mexico, the "porros". Originating in the cheering sections at university football games in the 1950's, these groups eventually became fighting gangs for hire. Their use in politics is illuminating in several important ways: it affords an unexpected insight into some other urban phenomena (student movements, agents provocation and political demonstrations), and it

illustrates class relations and the use and misuse of symbols for political control.

LOVISCEK, Anthony (Business, Purdue, Fort Wayne). "Industrial cluster analysis - backward or forward linkages?" *THE ANNALS OF REGIONAL SCIENCE* 16 (3): 36. 1982.

Regional and urban analysts have applied cluster analysis to input-output data to gain information about interindustry structure. This information has been used in studies of industrial location, changes in interindustry structure, and agglomeration economies. An important distinction which is underemphasized, however, is the difference between demand-constrained and supply-constrained interindustry relationships. Industrial clusters generated from demand-constrained (backward) linkages are likely to be quite different from those generated from supply-constrained (forward) linkages. This paper explores this difference using demand-constrained, supply-constrained, and weighted (combination of demand- and supply-constrained linkages) Leontief inverses. The results suggest strongly the need for generating clusters based on both types of linkages in order to obtain an accurate picture of interindustry structure.

MAYHEW, Bruce (South Carolina) & Paul SCHOLLAERT (Old Dominion). "The concentration of wealth: a sociological model." *SOCIOLOGICAL FOCUS* 13 (1): 1-35. 1982.

In this essay, we show that inequality in the distribution of wealth may be expected to occur by *chance alone* in human populations of given size and wealth, even when (prior distributions of) differences among individuals are ignored. This result generalizes to any measurable status characteristic or resource, including power and prestige, and therefore calls into question the view that knowledge of individual characteristics is requisite to an adequate explanation of social inequality. The model we develop to show this contains a number of additional theoretical and methodological implications, all of which bear upon substantive issues.

McKINLAY, John (Soc, Boston U). "Social network influences on morbid episodes and the career of the help seeking." Pp. 77-107 in L. Eisenberg & A. Kleinman, eds., *THE RELEVANCE OF SOCIAL SCIENCE FOR MEDICINE*. Dordrecht, Holland: D. Reidel. 1982.

The subject of this chapter (is) how the concept of a social network can facilitate explanation of the epidemiology of health - related events and much of the social phenomena associated with them.

MILARDO, Robert (Maine). "Friendship networks in developing relationships: converging and diverging social environments." *SOCIAL PSYCHOLOGY QUARTERLY* 45 (3): 162-172. 1982.

Changes in the structure of friendship networks are thought to complement change in a couple's level of involvement in a close relationship. As a pair become close, their network of mutual friends should increase in size, and with declining involvement a concurrent reduction in the number of mutual friends should occur. A measure of network overlap was derived from daily reports of social activity provided by participants. The hypothesized variations of stage and overlap are consistently supported in both cross-sectional and longitudinal tests. Network overlap covaries with stage of relationship, and this covariation cannot be accounted for by a couple's familiarity or length of dating. Underlying variations in overlap are compositional changes in the stability of the network membership, involving either the reclassification of friends or actual changes in network membership. The findings are discussed in terms of the importance of considering the social context of developing relationships, since that context can serve both facilitative and disruptive functions.

MINTZ, Beth (Vermont) & Michael SCHWARTZ (SUNY-Stony Brook). "The structure of intercorporate unity in American business." *SOCIAL PROBLEMS* 29 (2). 1981.

This paper examines the structure of intercorporate unity in the United States through an analysis of interlocking directorates. Our findings suggest that the major organizing institutions within the corporate world are the largest New York commercial banks, themselves united by a small number of prominent insurance companies. These institutions lend an order to corporate affairs and maintain a loose unity among firms. Although sources of conflict remain, patterns of director interlocks emphasize the capacity for cohesion supplied by the financial sector and suggest that mechanisms for conflict resolution reside within U.S. business.

MITCHELL, Roger (Psychiatry, Stanford). "Social network and psychiatric clients: the personal and environmental context." *AMERICAN JOURNAL OF COMMUNITY PSYCHOLOGY* 10: 387-_. 1982.

The study examines the extent to which characteristics of psychiatric clients (interpersonal problem-solving) and their families (family climate and family social resources) are associated with dimensions of clients' social networks (size and support). Respondents were 35 clients recruited from outpatient psychiatric clinics and the family members with whom they reside. The results revealed that individual and environmental variables were significant correlates of social network dimensions. For example, client problem-solving was positively related to the number of intimates cited by the client, while level of independence was positively related to the degree of support clients reported receiving from their peers. Level of client psychopathology partially moderated the effects of some of the predictor variables. The results highlight the need to examine the individual and environmental processes that shape and are shaped by social network patterns.

MIZRUCHI, Mark S. & David BUNTING. "Influence in corporate networks: an examination of four measures." *ADMINISTRATIVE SCIENCE QUARTERLY* 26: 475-489. 1981.

This study evaluates four quantitative measures of influence in networks of large corporations: (1) the absolute number of interlocks; (2) the Bonacich centrality index; (3) a modification of the Bonacich index using strong ties only; and (4) a further modification of the Bonacich index using strong ties weighted for directionality. These measures are applied to data from a sample of large American corporations in 1904, and the results are compared with the historical record. Results from the more sophisticated measures are shown to more closely resemble historical accounts of the period. Implications of these findings for studies of intercorporate relations are discussed.

MOOS, Rudolf & Roger MITCHELL (Psychiatry, Stanford). "Social network resources and adaptation: a conceptual framework." *Basic Processes in Helping Relationships* 213-232. 1982.

The pervasiveness of stressful conditions in modern life prompted Antonovsky's query: How do any of us manage to stay healthy? How can the majority of people continue to function adequately in the face of omnipresent stressors that are thought to cause or predispose individuals to develop physical and mental illness? These questions led Antonovsky to propose that health researchers alter their focus from pathogenesis (the development of abnormal functioning or illness) to "salutogenesis" (the maintenance of health). In addressing this issue, theorists have implicated two related sets of resources in the maintenance of adequate functioning as individuals encounter life transitions and crises: coping resources and social network resources. In this chapter we focus on social network resources and on their determinants and effects.

NIOSI, Jorge (UQAM). "The Canadian multinationals." *MULTINATIONAL BUSINESS* 2: 24-33. 1982.

This paper is organized into four different parts. In the first the growth of Canadian direct investment abroad is analysed by its geographical and industrial distribution, and compared with US foreign direct investment. In the second, the most important Canadian multinational corporations are identified with their size, their role in Canadian industry and their methods of producing or absorbing technology. In the third section the role of the Canadian government with regard to outward and inward direct investment policy is discussed. Finally some theories on multinational corporations are recalled, and the behaviour of Canadian global giants is compared to current models on multinational firms.

MYERS, Jr., Samuel (Econ, Wisconsin). "The economics of crime in the urban ghetto." *REVIEW OF BLACK POLITICAL ECONOMY* 9 (Fall): 34-59. 1978.

This paper explores the economic aspects of participation in illegitimate activities in urban ghetto areas. The motivation for examining economic issues underlying ghetto crime and at the same time ignoring other important components of the interlocking mechanisms generating crime stems from a desire to question the efficacy of economic policy in general and labor market policy in particular in reducing crime.

OXLEY, Diana, Manuel BARRERA, Jr. & Edward K. SADALLA (Arizona State). "Relationships among community size, mediators, and social support variables: a path analytic approach." *AMERICAN JOURNAL OF COMMUNITY PSYCHOLOGY* 9 (6): 637. 1981.

There is a growing recognition of the need to understand not only how social support functions in relation to characteristics of the individual, but also how it may relate to aspects of the communities in which it arises. The present study identified population size as a potentially important community variable vis-à-vis social support. Urbanization theory was used to generate hypotheses about relationships among community size, mediators, and two social support variables: social network size and the average social support provided by network members. In a telephone survey of four communities of varying sizes, respondents answered questions about the social support provided by their network members, relations with neighbors, and the extent of their social participation. The path analysis results suggested that larger communities are associated with lower average social support and a pattern of social interaction which limits social participation and, in turn, network size.

PERRUCI, Robert & Dean TARG (Soc, Purdue). "Network structure and reactions to primary deviance of mental patients." *JOURNAL OF HEALTH AND SOCIAL BEHAVIOR* 23: 2-17. 1982.

A network approach to understanding mental illness is offered as an alternative to the psychiatric model and to societal reaction theory. 47 social networks which had recently committed members to a mental hospital are examined by interviews with 199 network members. Patients are classed according to their status resources and the type of symptoms for which they were committed. Network properties include density, openness, ties among members, and instrumental role structure. Network differences are found to be associated with how patients' initial unusual behaviors are defined, and the speed with which hospitalization occurs. Properties of social networks, rather than status resources or symptoms, provide better understanding of response to initial acts of deviance and actions leading to hospitalization.

PILISUK, Marc (Cal-Davis). "Delivery of Social support: the social inoculation." *AMER. J. ORTHOPSYCHIAT.* 52 (1). 1982.

A review of the literature on health breakdown and susceptibility to mental and physical illness points to a pervasive relationship between health status and the insufficiency or disruption of interpersonal ties. 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. The emergence of supportive networks and the preventive role of mental health workers are considered.

PRICE, Rumi Kato (Soc, Cal-Berkeley). "Groups, leadership, and social boundaries: an application of a spatial model to the analysis of a multiple network system." (MIMEO.)

Can highly technical network analysis procedures inform a substantively rich ethnographic analysis of social differentiation? The data described are reported in Kapferer's (1972) ethnography of workers in a Zambian factory between the summer of 1965 and the winter of 1966. Two primitive models of social structure are presented as a heuristic contrast in conceptualizing the social structure of the factory. The data are analyzed in terms of "social" and "role" distances among structurally equivalent workers in the factory. It is clear that the factory exhibited an oppositional structure over time; however, there was a change of leadership within one of the networks even if overall social structure of the factory was stable. Occupational rank remained the key parameter underlying social differentiation in the factory at both time points, despite a considerable amount of turnover in employees. Overall, the factory system was quite static over time -- the upheavals reported in the original study notwithstanding.

REBBI, Claudio (Physics, Brookhaven Labs). "The lattice theory of quark confinement." *SCIENTIFIC AMERICAN* 248 (Feb): 54-65. 1983.

The force between quarks in a particle such as the proton has been simulated by imposing a discrete lattice on the structure of space and time. The results suggest why a free quark cannot be isolated.

SEEMAN, Melvin & Carolyn ANDERSON (Soc, UCLA). "Alienation and alcohol: the role of work, mastery, and community in drinking behavior." *ASR* 48: 68-77. 1983.

The correlates of drinking behavior, and of drinking problems, are examined, using a sample of some 450 employed males in a metropolitan community. Multiple indices bearing on three domains of alienation -- work

experience, powerlessness, and social isolation -- are employed to predict drinking habits and problems. Regression and covariance analyses establish that: (1) the sense of low control (high powerlessness) is consistently associated with heavier drinking and with drinking problems; (2) contrary to predictions that derive from an emphasis on the centrality of work, none of the work experience indices (e.g., job satisfaction, substantive complexity, or the level of intrinsic reward in work) is significantly associated with drinking phenomena; and (3) the hypothesis that social integration might serve as a buffer (ameliorating the negative impact of high powerlessness or of alienated work) is not supported since high social involvement correlates positively with heavier drinking. An analysis of the interaction among the three forms of alienation indicates that though powerlessness has the most consistent main effect, engagement in alienated work and involvement in social networks combine with powerlessness to yield distinctive drinking patterns.

SHARP, John (South Carolina Energy Research Inst.), Eui Hang SHIN (South Carolina) & LeRoy F. SMITH (Stanford). "A network analysis of departmental prestige based on the origins of faculty degrees." *BEHAVIORAL SCIENCE* 27: 12. 1982.

This paper deals with networks of personnel recruitment at the organization level. A triad census and a CONCOR blocking algorithm are applied to a matrix of origin of Ph.D. degree by current employment for 48 selected graduate departments of sociology. The results reveal that conventional reputation (prestige) hierarchy models are of limited utility in describing the actual decision making concerning hiring by departments. Regional and specialty similarities influence the observed patterns greatly. These findings suggest that interorganizational networks can be investigated fruitfully with many of the same theories and methodologies previously used only in the study of interpersonal networks.

SILVER, Harry. "Going for brokers: political innovation and structural integration in a changing Ashanti community." *COMPARATIVE POLITICAL STUDIES* 14 (2): 233-263. 1981.

Local chiefs and headmen frequently bear the brunt of interhierachical conflict in African nations, resulting in severe intrarole tensions. Many theorists consider this the natural outcome of an inherent incompatibility between traditional and modern political structures, with both making conflicting demands upon local officials. This article supports an alternative position, arguing that dynamic interaction between these structures may actually *promote* political cohesion. A case study from Ashanti is presented documenting how, at the local level, new positions are created to perform traditional functions while long-established leadership roles are coopted in the service of modernization. These local innovations are further assessed in the context of their articulation with "state" and national systems over the past century. Results of this analysis show that: in complex sociopolitical structures discrete systematic levels may respond differently to "common" external stimuli, and effective political cohesion need not be achieved at the expense of ethnic integrity.

SOKOLOVSKY, Jay & Carl I. COHEN. "Toward a resolution of methodological dilemmas in network mapping." *SCHIZOPHRENIA BULLETIN* 7(1): 109-116. 1981.

In mapping social networks, investigators have confronted the following choices in the selection of an instrument to assess networks: qualitative versus quantitative approaches; subjective versus objective criteria; synchronic versus diachronic descriptions. Evolving out of fieldwork with discharged mental patients, the Network Analysis Profile was designed to resolve these methodological dilemmas. Although it has not been completely successful in meeting this goal, the Network Analysis Profile offers distinct advantages over other instruments. A description and an illustration of its use are provided.

SOKOLOVSKY, Jay (Maryland) & Carl COHEN (N.Y.U. Medical Center). "Measuring social interaction of the urban elderly: a methodological synthesis." *INT'L JOURNAL OF AGING AND HUMAN DEVELOPMENT* 13 (3): 233. 1981.

In general, the gerontological literature has characterized the inner-city elderly, especially those aged residing in single room occupancy hotels, as "isolates" or "loners." However, it is proposed that the notion of isolation is largely a myth and that studies have been hampered by inadequate research instruments. This paper illustrates: The severe limitations of the traditional measures of determining sociability. How social network analysis can overcome many of the deficiencies of other methods. How a synthesis of the anthropological and sociological approaches to network analysis can optimize data collection and provide culturally meaningful information.

SOUTH, Scott (Houston), Charles BONJEAN (Austin), William MARKHAM (North Carolina) & Judy CORDER (Texas). "Social structure and intergroup interaction: men and women of the federal bureaucracy." *ASR* 47: 587-599. 1982.

Questionnaire data from female employees in a large federal bureaucracy are analyzed to test two theories on the effects of females' proportional representation in work groups on intra- and intergender relations. In general, the data support hypotheses drawn from Blau and Blalock which suggest that the proportional size of a minority subgroup is negatively related to its frequency of contact with, and amount of social support received from, the majority. In addition, female proportional representation is negatively associated with the amount of encouragement for promotion women receive from their male supervisors. Contrary to Kanter's theory, token women are not found to face more severe organizational pressures than nontokens. However, it is suggested that the dynamics of tokenism described by Kanter tend to partially offset the negative association between female representation and the frequency and quality of male-female interaction patterns. Female representation is found to have significant, but counterbalancing, effects on mutual social support among female workers.

STRAUSS, David & A. Kimball ROMNEY (Irvine). "Log-linear multiplicative models for the analysis of endogamy." *ETHNOLOGY* 21 (1): 79. 1982.

In this paper our major goal is to describe and illustrate the application of multiplicative or log-linear models to the problem of endogamy. The use of these models is becoming increasingly widespread in social sciences. In anthropology, for instance, Burns has used the method in a cross-cultural study to analyze the occurrence of dental caries in skeletal series; Burton and Reitz, in their cross-cultural study of the plow, female contribution to subsistence and polygyny, also rely heavily on the method. We hope that to some extent our treatment here will serve as an introduction to the idea and possibilities of such modelling. As we shall see, however, endogamy data has a special form, the main diagonal of the table playing a prominent role, and we shall need some rather special log-linear models to capture ideas about the pattern of endogamy.

STRUG, David & Merton HYMAN (Alcohol Studies, Rutgers). "Social networks of alcoholics." *JOURNAL OF STUDIES ON ALCOHOL* 42 (9): 855. 1981.

In this article we report the results of an analysis of the social network characteristics of two samples of alcoholics interviewed in Seattle, Washington, during the spring and summer of 1979. One sample was of men in treatment at an inpatient rehabilitation center. The other sample was drawn from men who were screened and interviewed at a county detoxication center and who claimed that they had never received formal treatment for alcohol problems.

The purposes of the study were to determine (1) whether the social networks of the two groups differed, (2) whether alcoholics enter treatment as a last resort when they lose attachment to their social networks, (3) whether alcoholics fail to seek treatment because they have networks whose members are supportive and tolerant of their drinking and (4) the implications for alcoholism treatment if the social networks of the two groups of alcoholics were demonstrably different.

SURACE, Samuel & Melvin SEEMAN (Univ. of Calif., Los Angeles). *The experience of migration: settlement and adjustment in Milan.* " *SOCIOLOGICAL INQUIRY* 51 (2): 83-97.

We examine two perspectives on the management of migration, involving the distinction between settlement and adjustment. The latter refers to urban migration that involves significant personal maladjustment, while settlement emphasizes the importance of social networks and coping strategies in moderating the consequences of migration. Using a sample representing both rural and urban origins and differential length of residence in Milan, it is shown that (contrary to assumptions involved in the "maladjustment" perspective) neither prior urban experience nor length of exposure to urban life is associated with better adjustment. Various coping strategies are explored (e.g., pre-migration and social-network help) as potential contributors to successful settlement. Finally, the "settler" (in contrast to the "maladjuster") is shown to be more insulated from urban-oriented change in life style and ideology.

TOLBERT II, Charles M. (Florida State). "Industrial segmentation and men's career mobility." *ASR* 47: 457-477. 1982.

Despite the increasing acknowledgement of the "new structuralism" in social stratification research, important issues and assumptions remain to be examined. The present research employs the industrial segment-

ation version of the new structuralism to evaluate the neglected hypothesis that industrial sectors constrain career mobility. A conventional mobility analysis is employed to study men's occupational mobility within and between oligopolistic and competitive industrial sectors. Results of the analysis suggest that the influence of industrial sectors is most apparent in late career mobility patterns where sectors appear to be relatively impermeable barriers to mobility. The effect of industrial sectors on earlier intragenerational mobility is also evident in the analysis. During the early career, certain origins appear to facilitate intersectoral mobility while others clearly constrain such mobility. The results suggest that the augmentation of analyses with information on industrial segmentation aids in interpreting observed mobility patterns. Moreover, the findings indicate that there is some substance to the immobility theme implicit in the new structuralist literature.

TOUSIGNANT, Michel (UQAM) & H.B.M. MURPHY (McGill). "The epidemiological network survey: a new tool for surveying deviance and handicaps -- a research note." *SOCIAL FORCES* 60 (3): 854-858. 1982.

The Epidemiological Network Survey is a new research tool assessing the prevalence of certain types of deviant behavior and handicapping states such as drug abuse, delinquency, and being victim of the violence. based on the key informant method in anthropology, it employs randomly selected community respondents to provide information on groups of anonymous acquaintances. The instrument was developed to survey problems about which official records and self-reports have been proved inadequate in the past even when confidentiality is assured, alcohol abuse being one well-documented example of the latter.

TSAI, Yung-Mei (Texas Tech) & Lee SIGELMAN (Kentucky). "Stratification and mobility in big-time college football." *SOCIOLOGICAL METHODS & RESEARCH* 8 (4): 487-497. 1980.

White's vacancy chain model of stratification and mobility in a social system was applied to American big-time college football teams during the postwar period. Two specific vacancy chain models were generated, the binomial and the more general models. Both models were found to describe the empirical results well. The vacancy chain model appeared to show potential for developing broader understandings of the generic processes of stratification and mobility. Substantively, the empirical results demonstrate the extreme stratification and slow mobility that characterize the big-time college football system, and underline the difficulties outsiders face when they try to become members of the football elite.

TSAI, Yung-Mei & Lee SIGELMAN. "The community question: a perspective from national survey data -- the case of the U.S.A." *THE BRITISH JOURNAL OF SOCIOLOGY* 33 (4): 579-588. 1982.

Using data from NORC General Social Survey, 1972-78, this study examines the three perspectives on the community question integrated and summarised by Wellman: that community has been 'lost', 'saved', and 'liberated' in contemporary large cities. Frequency of spending a social evening with relatives, neighbors, and friends from outside the immediate neighborhoods were construed as indicative of the strength of ties. A comparison among the urbanites, the suburbanites, and residents of small towns or rural areas was made to examine the hypotheses that the three different perspectives suggest. The results indicate partial support for the 'lost' perspective: none for the 'saved' perspective; and a complete support for the 'liberated' perspective. Implications of the findings and comparisons with other previous studies were discussed.

WARHEIT, George (San Diego State), William VEGA (San Diego State), David SHIMIZU (San Jose) & Kenneth MEINHARDT "Interpersonal coping networks and mental health problems among four race-ethnic groups." *JOURNAL OF COMMUNITY PSYCHOLOGY* 10: 312. 1982.

This paper presents field survey data on the availability and use of familial and friendship networks and their relationships to mental health. The samples (n = 5,174) include Whites, Blacks, Mexican Americans, Anglos, and Guamanians. More than 2/3s of all respondents in the various race-ethnic groups reported nearby family members upon whom they could call in times of need. Approximately three-fourths of the same respondents indicated having nearby supportive friends. Between 25% and 35% of the subsamples sought help from family members in the 12 months preceding their interview; help seeking from friends ranged from 20% to 47%. Some variations were found but overall the presence of family members perceived as coping resources was not significantly associated with reported levels of mental health problems. However, the presence of friends was significantly associated with lower levels of psychiatric symptoms and dysfunctions for the Anglo and Mexican-American subsamples. It was not significant for the other groups. Further, the data indicate that the use of familial and friendship networks did not appear to ameliorate mental health problems. To the

contrary, those who sought assistance from family members and/or friends had significantly higher psychiatric symptom and dysfunction levels than those who did not. The authors concluded that the relationship between the availability and use of interpersonal networks and mental health are complex and varied. As such, generalizations regarding these relationships cannot be made in the absence of specific data.

WEATHERFORD, M. Stephen. "Interpersonal networks & political behavior." *AMERICAN JOURNAL OF POLITICAL SCIENCE* 26 (1): 117-____. 1982.

The social context of political decision making is a critical component of explanations of political behavior. Little research, however, has focused on direct observation of the social circles that transmit political information and influence. This paper describes local, neighborhood-based social networks as influences on individual political attitudes. I propose and estimate models of the sources and impacts of interpersonal networks in the mass public, using data on political networks collected as part of the research and development efforts for the National Election Studies.

WEIMANN, Gabriel (Haifa). "On the importance of marginality: one more step into the two-step flow of communication." *ASR* 47: 764-773.

This study applies cross-level network analysis to modify the Two-Step Model of communication flow, focusing on marginally positioned individuals and pointing out the "bridging function" of marginals in the flow of information between groups. The hypotheses examined derive from the concepts of the Balance Theory, applied to network analysis, suggesting that the "Strength of Weak Ties" and the related tendency toward intransitivity are the structural advantages of marginals in the process of communication flow. By and large, the findings support the claimed importance of marginals, suggesting the ability of network analysis to provide a micro-macro bridge in current sociological theory and research.

WELLS, Lilian & Grant MACDONALD (*Soc Work, Toronto*). "Interpersonal networks and post-relocation adjustment of the institutionalized elderly." *THE GERONTOLOGIST* 21 (2): 177-183. 1981.

Interpersonal networks of 56 residents in a home for the aged were studied before and after relocation. Close primary relationships were associated with successful adjustment to relocation as measured by changes in life satisfaction, in degree of physical infirmity, in psychological deterioration and agitation. Further study is needed to focus on the differential quality and nature of intimate ties in the friendship, kinship, and caregiving sectors of the network and to determine how helpful interactions can be fostered.

WENTOWSKI, Gloria. "Reciprocity and the coping strategies of older people: cultural dimensions of network building." *GERONTOLOGIST* 21 (6): 600. 1981.

The study used structured interviews and participant observation to obtain an insider's perspective on "helping out" within the networks of fifty older people living in the urban South. This paper describes: the cultural rules directing exchanges of support within the networks, and the variation in the way older individuals interpret these rules in creating support over time. The research also reveals the great personal significance of reciprocity for preserving the self-esteem of older people.

WIESSNER, Polly. "Measuring the impact of social ties on the nutritional status among the !kung San." *SOCIAL SERVICES INFORMATION* 20 (415): 641-678. 1981.

This paper takes up the problem of measuring the impact of social ties on nutrition. It does so by discussing the approach, methodology, problems and results of a study, in which I tried to systematically investigate and quantify the local and regional social ties of the !kung San, and co-ordinate the results with a nutritional study carried out by Wilmsen (1980) in the same area. I hope to show that social relationships can be assessed in a way which allows them to be included in the research design of a nutritional study, so that their positive or negative impact can be measured.

The study discussed here was carried out from 1973-77 in conjunction with, although not as part of, Wilmsen's nutritional study of the !kung at /xai/xai. It was an ethno-archaeological study, aimed at gaining a more thorough understanding of how material culture supports and symbolizes social relationships, and how specific organizational strategies are reflected in profiles of stylistic variation in artifacts over space.

To do this, it was necessary: 1) to quantify all aspects of social relationships including the movement of persons and objects, and 2) to discover how the above relationships function within the society. Part of this function is to maintain food distribution links, thus it was critical to collect data in such a way that it could be linked to Wilmsen's findings.

WILLIAMS, Anne S. "Problems with using self reports in network analysis." *RURAL SOCIOLOGY* 46 (3): 514-517. 1981.

Using methods similar to those described by Deseran & Black (1981), local elites in 3 upstate NY counties were identified and asked to indicate their degree of contact with each other. Reciprocated accounts of contact occur most frequently, and when combined with reciprocated accounts of no contact, account for 90% of the possible pairwise comparisons. (See also Deseran & Black's response, pp. 518-520).

WILLIAMS, R.G.A. (Med Soc, Aberdeen). "The art of migration: the preservation of kinship and friendship by Londoners during a history of movement." *SOCIOLOGICAL REVIEW* 29 (4): 621-47. 1981.

What happens, after people migrate, to their former relationships with kin and friends? My purpose is to discuss an urban case in which patterns of continuity are surprisingly frequent. Several types of migration are canvassed in which direct contact with the original connections of the migrant are preserved. In the first type, what appears to be fairly long-distance migration is actually no more than a shift within what the migrant still conceives as his home territory. A second kind of migration preserves some former relationships at the expense of others. It is usually occasioned by marriage. A third type takes the form of a sequence of moves, and the sequence takes one of several patterns (e.g. return or chain migration) which tend to maintain or reconstitute the migrant's original relationships.

WHITE, Douglas, Michael BURTON (Soc Sci, Cal-Irvine) & Malcolm DOW (Anthro, Northwestern). "Sexual division of labor in African agriculture: a network autocorrelation analysis." *AMERICAN ANTHROPOLOGIST* 3 (4): 825-849. 1981.

A model of causes and consequences of sexual division of labor in agriculture is tested using a sample of African societies. Crop type and the presence or absence of slavery are shown to be effective predictors of the degree of female contribution to agricultural subsistence, and the degree of polygyny is shown to be affected by female agricultural contribution and the form of residence. Autocorrelation effects are found and are shown to be a consequence of Bantu societies having higher female participation in agriculture than would otherwise be expected. This effect is an example of one of the kinds of phenomena that anthropologists have referred to as Galton's problem.

WHITT, J. Allen (Brown). "Is oil different? A comparison of the social backgrounds and organizational affiliations of oil and non-oil directors." *SOCIAL PROBLEMS* 29 (2): 142-150. 1981.

This paper examines the internal integration of the U.S. capitalist class. I compare directors of oil companies with non-oil directors on the basis of social class background, membership in social clubs and policy organizations, and participation in more than one board of directors. This comparison is interesting because of the supposed maverick nature of the oil industry. Although there are some differences between oil and non-oil directors, there is little evidence that the oil industry is not integrated into the capitalist system. I discuss the implication of my findings for theories of the unity, segmentation, and internal structure of the capitalist class.

WRIGHT, Erik Olin, Cynthia COSTELLO, David Hachen & Joey SPRAGUE (Wisconsin). "The American class structure." *ASR* 47: 709-726.

This paper presents the first systematic investigation of the American class structure based on data gathered from an explicitly Marxian, relational perspective. Classes in this research are not defined in terms of categories of occupations, but in terms of social relations of control over investments, decision making, other people's work, and one's own work. Data on these dimensions of social relations of production were gathered in a national survey of the U.S. working population. Four general results from the study are particularly important: (1) The working class is by far the largest class in the American class structure. (2) Close to half of all locations within the class structure have a "contradictory character," that is, their class content is determined by more than one basic class. The American class structure cannot therefore

be represented by any simple scheme of class polarization. (3) Lower status white-collar occupations are virtually as proletarianized as manual occupations. It therefore makes little sense to consider such occupations as part of the "middle class." (4) Women and blacks are considerably more proletarianized than white males. The result is that a sizable majority of the U.S. working class is composed of women and minorities.

YOUNG, Carl E., Dwight E. GILES, Jr. & Margaret C. PLANTZ. "Natural networks: help-giving and help-seeking in two rural communities." *AMERICAN JOURNAL OF COMMUNITY PSYCHOLOGY* 10 (4): 457-____. 1982.

A group of 213 respondents in rural communities were interviewed about their help-giving and help-seeking behaviors related to 11 problems of living. Respondents were asked whom they had talked to within their natural community networks, who was most helpful, and how effective they rated the helping. The results indicate that over 80% of the respondents saw themselves as active help-givers and receivers in exchanges with spouses, friends, relatives, and others. A wide range of helping activities were reported. led by attempts to understand another person's situation and feelings and just listening. Differences in help-giving and help-seeking were noted. Respondents indicated a general willingness to tackle problems, a preference for help from people within their networks, and that this type of help is effective.

(NETWORK NOTEBOOK continued from page 14)

Two new journals from Sage Publications (Bos 5024, Beverly Hills, CA 90210) are:

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COMPUTER PROGRAMME

Graph Definition And Analysis Package (GRADAP) by Frans N. Stokman, Univ of Groningen (The Netherlands)

GRADAP is a program package for the analysis of graph and network data with

- many input facilities and documentation modes, suitable for social networks up to 6000 points and 60000 lines;
- many facilities to generate new graphs from the original data, particularly through the main processes of selection, aggregation and induction;
- analytic modes and special facilities for all current types of analysis for simple graphs, digraphs and valued graphs;
- a direct data interface with SPSS and its related programs (SIR and STAP) giving extra manipulation facilities and large possibilities to analyze multi-graphs and to relate social network results to other characteristics of points and lines;
- a user oriented language structure, as far as possible and useful comparable with that of SPSS and its related programs.

GRADAP has been developed and documented by a projectgroup of the Universities of Amsterdam, Groningen and Nijmegen. The package has been written in standard FORTRAN 4, argumented with CDC assembler in places where this was inevitable. This makes the current version suitable for CDC Cyber installations.

1. Graph definition in GRADAP

The definition of a graph or network in GRADAP consists essentially of the definition of the elements of a graph: the points in the graph or network, the information associated to the points (pointinfos), the lines, and the information associated to the lines (lineinfos). A further extension to this basic scheme is the possibility to group the points and the lines (during their definition) into pointsets and linesets, respectively. These sets will in general be disjoint, but overlap is allowed. Sets play an important role in the GRADAP language and a number of statements exist to define new sets or redefine existing ones. These will be discussed in the next subsection.

Both points and lines may be defined, together with any associated info values, either free formatted as part of the user program or by fixed format input. In the latter case that data may be either embedded in the user program or reside on an alternate input medium.

It should be realized that the flexibility of GRADAP's data structure is particularly due to the fact that it is not based on the commonly used representation of a graph by its adjacency matrix between the points. GRADAP's data structure consists essentially of a point data matrix in which the points are the cases and the pointinfos the variables defined on the points, together with a line data matrix in which the lines are the cases and the lineinfos the variables defined on the lines. The possibility to define (overlapping) point- and linesets increases the flexibility even more, because it enables a user to submit any (partial) (sub)graph for analysis.

For identification in the user program the graph as a whole, point- and linesets, point- and lineinfos are identified by unique names of up to eight characters.

Further documentation is possible by labels.

Points may be identified by such names and documented by labels, but in some situations GRADAP allows labels to be used for identification as well. In user programs lines can only be referred to by their sequence number, a possibility which also exists for points.

Once a graph is defined it may be saved and accessed in later programs, thus providing a "canned" definition. GRADAP also supports addition of new points and lines to an existing graph and addition of values of points and lines in new point and lineinfos. Both types of extension may be carried out via fixed format input or, in the case of new point- or lineinfos, through SPSS system files.

2. Data management

GRADAP has many facilities to generate new graphs from the original graph. These data management facilities may be divided in facilities that modify the basic structure of the graph or network, i.e. create new points or lines and/or delete existing points or lines, and facilities that modify the set structure by defining new pointsets or linesets, or redefining old ones. Modifications that affect the basis structure of the graph or network are:

- induction, where two points in the new graph are directly connected by a line, if these two points have a common neighbor in the original graph. The points of the induced graph are a subset of the points in the original graph. The induction process can be limited to common neighbors in a certain subset of points of the original graph. In directed graphs several induction methods are possible by taking into account the direction of lines.

- combination, where parallel lines are replaced by single new lines;
- condensation, where points in user-defined equivalence classes are replaced by single new points;
- sampling of points and/or lines, where the points and/or lines that do not belong to the sample are deleted;
- reversion of the direction of lines.

New sets may be defined (and already existing sets may be redefined) by enumeration of their constituting elements, by giving their definition in the form of a set expression (using set operators as AND, OR, XOR, NOT and MINUS), or by specifying a selection clause. The latter form allows users to define pointsets on the basis of pointinfo values, and linesets on the basis of lineinfo values and on the basis of pointinfo values for the endpoints of the lines.

Direction is an attribute of linesets: each lineset may be declared DIRECTED or UNDIRECTED. In the latter case, GRADAP will treat lines in the lineset as having no direction. Although the endpoints of each line have a fixed meaning (one is the TAIL, the other is the HEAD and the line, if treated as directed, is directed from TAIL to HEAD), they are treated as equivalent when the line is part of an undirected lineset.

3. Analytic procedures

The analysis phase of a GRADAP user program consists of an unlimited number of analysis blocks, each of which may be optionally preceded by temporary data management statements. These temporary modifications remain in effect until the analysis block is completed. Each analysis block starts with an ANALYSE SETS statement, that specifies the (partial) (sub)graphs to be analyzed in the subsequent block. The block is terminated by an END ANALYSE statement. Within an analysis block one or more analytical procedures may be activated, of which the following are currently available:

- ADJACENCY, that computes the adjacency matrix and optionally lists the isolated points and for each non-isolated point its neighbors.
- CENTRALITY, that computes point and graph centrality measures based on adjacency, distance or all sequences in the graph.
- DISTANCE, that computes the distance matrix and corresponding statistics based on distance and neighborhood.
- REDUCE, that reduces the graph in an iterative process to the null graph, according to criteria based on adjacency and incidence.
- RUSH, that computes the centrality measure rush for points and optionally for lines. This measure is based on the structural property betweenness.
- SUBGRAPHS that detects subgraphs like (strong) (weak) components, blocks and N-cliques.
- VARIANCE DEGREE that computes measures of graph heterogeneity based on the variance of the degrees of the points. (see Snijders, 1981)
- SPATIAL AUTOCORRELATION that computes coefficients of spatial autocorrelation. In social network applications the idea behind spacial autocorrelation, namely whether spatially adjacent territories have the same characteristics, can be replaced by a non spacial interpretation, namely whether adjacent points have the same characteristics (Schmidt and Van Veen, 1980).

Moreover several informative procedures are available, such as list/write graphinfo (cf list/write file info of SPSS) and list/write points/lines (cf list/write cases of SPSS).

4. An example

As an illustration of the fixed formatted input of a graph and GRADAP's data structure we selected seven countries and a few interactions among them in a UN Committee as observed by Alger (1966) in his study of informal interactions at the UN. The seven countries are identified by a name (the pointinfo POINTNAM). Moreover, of each country its net contribution in dollars to the regular budget of the UNO in 1962 is given as a second pointinfo (NCONTR). In the line data matrix TAIL and HEAD contain the names of the endpoints of the line (interaction).

Two other lineinfos are associated with the lines, namely MEETNUM (number of the UN Meeting) and DURATION (duration of the interaction in minutes).

Of the first 6 interactions initiative was known: they can be directed from tail to head therefore. To define the graph and save it for future use, the user's program is as follows:

```

RUN NARE EXAMPLE OF GRAPH DEFINITION AND SAVE GRAPH
GRAPH NAME ALGER1      EXAMPLE FROM ALGER INTERACTION DATA
POINT IDENTIS NAME
POINTINFO LIST POINTNAM NCONTR
N OF POINTS 7
INPUTFORMAT (A8, X, I8)
INPUT MEDIUM CARD
READ POINTINFO
AUSTRALI 1294537
CANADA 2451553
DENMARK 451230
IRELAND 111823
NETHERLD 784252
NORWAY 349562
USA 28582212

```

point data matrix

```

TAIL IDENTIS NAME
HEAD IDENTIS NAME
LINEINFO LIST TAIL HEAD MEETNUM DURATION
LINESET LIST INITKNWN (6) INUNKNWN (4)
INPUT FORMAT (2(A8,X)I2)
INPUT MEDIUM CARD
READ LINEINFO
NORWAY  NETHERLD 958 02
NETHERLD AUSTRALI 975 03
AUSTRALI USA 972 09
CANADA  IRELAND 963 04
CANADA  NETHERLD 972 05
USA     CANADA  958 02
NORWAY  USA 957 05
NETHERLD IRELAND 959 03
IRELAND USA 957 19
DENMARK NORWAY 957 01
DIRECTED INITKNWN
INFO LABELS MEETNUM NUMBER OF THE MEETING/
            DURATION DURATION OF THE INTERACTION/
            NCONTR CONTRIBUTION TO UN BUDGET IN 1962
SET LABELS  INITKNWN INITIATIVE OF INTERACTION KNOWN/
            INUNKNWN INITIATIVE OF INTERACTION UNKNOWN
SAVE GRAPH
FINISH

```

} line data matrix

To test the hypothesis that countries with a high contribution to the UN budget are central in the network of interactions, all major types of point centrality measures (degree, betweenness, closeness; see Freeman, 1978) can be computed and written to an alternative output file with the analytic procedures CENTRALITY and RUSH. In the next run these measures can be added to the point data matrix as new pointinfos (ADD POINTINFO) and the extended point data matrix can be saved at once as an SPSS system file (SAVE SPSS FILE POINTS = ALL/INFOS = ALL) to compute correlations with SPSS.

As a last illustration of the GRADAP's possibilities, let us assume that the user is interested in the distribution of initiative in long interactions between NATO and Warsaw Pact. The following user's program will contain the desired results:

```

RUNE NAME EXAMPLE DISTRIBUTION OF INITIATIVE IN LONG NATO-WARSAW INTERACTIONS
GET GRAPH ALGERI
DEF POINTSET NATO=(USA,NETHERLD,...)
DEF POINTSET WARSAW=(USSR,...)
CRE LINESET (DURATION GE 5) LONG
DEF LINESET LONGDIR = LONG AND INITKNWN
DIRECTED LONGDIR
ANALYSE SETS INTER = NATO BY WARSAW WITH LONGDIR
CENTRALITY PNTCENT = DEGREE
END ANALYSE
FINISH

```

5. Current applications

GRADAP has been formally introduced at COMPSTAT 1982 (Sprenger and Stokman, 1982). At this moment GRADAP is available at university computer centra in five countries. Major current applications of GRADAP are:

- a comparative project on intercorporate structure in 10 countries. In each country 250 major corporations and financial companies have been selected. The intercorporate structure is being analyzed on the basis of interlocking directorates and financial participations. The results of the study will be published at the end of 1983 (Stokman, Ziegler and Scott, forthcoming)
- a comparative project of house-moving patterns in 10 cities in the Netherlands (dissertation Everaers, Free University of Amsterdam, to be expected 1983)
- a study of the Dutch Catholic elite and its institutions
- several projects in the field of small group analysis, such as the network of interactions in a small Indonesian community during a campaign for birth control (dissertation Van Norren, University of Groningen, to be expected in 1983)
- analysis of conceptual networks and cognitive structures
- analysis of international networks of banks and industry (Fennema, 1982)
- analyses of historical changes in networks of interlocking directorates in the Netherlands (Schijf, 1980) and the Netherlands Indies (Baudet and Fennema, 1983).

6. Extensions

In the first half of 1983 GRADAP will be extended with the analytic procedure TRIAD COUNT, to perform the triad census, as developed by Holland and Leinhardt (1970, 1975), but with special adaptations in case bipartite

graphs are analyzed.

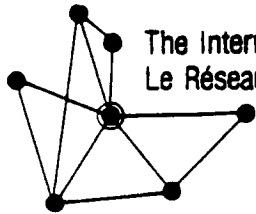
In 1983 and 1984 extensions are planned, specially focussed on plotting of graphs and the analysis of signed graphs. Moreover, at that time, a FORTRAN 77 version of GRADAP may be expected, that is portable to all major computers.

7. GRADAP documentation and tariffs

The GRADAP User's Manual (Stokman and Van Veen, 1981) amounts to 410 pages and is contained in two volumes. The first volume consists of an introduction, a description of graph management and informative procedures, a summary of all statements and a recommended sequence of statements in a GRADAP program. The second volume consists of six chapters, each describing an analytic procedure. The description of the analytic procedures consists of a theoretical introduction of the method used, a description of the program, a control statement description including options and statistics of the procedures and sample output. The manual can be obtained at the correspondence address (price US\$ 13.00). For academic institutions GRADAP can be obtained to the initial fee of US\$ 250.00. There is no annual renewal fee. New versions can be obtained at reduced price. Other prices are available on request.

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Intercorporate Structure. Comparative Analysis of Ten Countries.



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