

Networks, Cognition and Ethnography: Thomas Schweizer 1949-99

One of the leading European anthropologists, a devotee to network research, cognitive and comparative anthropology, is dead at the age of forty nine. Thomas Schweizer, Director of the Institute of Ethnology at the University of Cologne, Germany, died on March 1, of complications resulting from Leukemia.

For his outstanding work in science and Institution building Schweizer became the first anthropologist ever to win the prestigious Leibniz five year award of the DFG (Germany's NSF) in 1995. The Leibniz award provides young senior scientists with "nonbureaucratic" funding in the "prime time" of their academic careers. Schweizer - free to choose what to do with funding - dedicated it to launch a major project on networks and cognition involving graduate students at Cologne and colleagues from abroad - Irvine, Florida, Paris and Caen. While he supported 7 graduate students to do fieldwork and to write their Ph.D. thesis under that common framework he took the time for theoretical and comparative, empirical synthesis. The first major outcome was a book published in German on "Patterns of Social Order: Network Analysis as a Foundation for Cultural Anthropology" (Muster Sozialer Ordnung 1996). A second book, on Social Networks and Ethnography: Rethinking the Foundations of Social/Cultural Anthropology was in progress as the finale to the project. In the manuscript, he argues that the fundamental building blocks of society, economy, politics and communication are networks of actors connected by such ties as kinship, friendship, economic exchange, and social support. Network analysis is able to arrive at structural descriptions of patterns of social action as well as explanations of strategic action and their complex outcomes. The explanatory model is enriched and grounded, however, when cognitive anthropological methods are used to elicit actor schemas that circumscribe the decision-making of actors within network constraints. The network paradigm not only accounts for structure and dynamics of social action internal to a society/economy/polity or local context, but is used to represent the embedding of local cases in the larger context through specific patterns of network ties.

The evolution of Schweizer's visionary approach to network thinking and empirical approaches in anthropology can be divided into three overlapping phases of his career. I) First came his dissertation and subsequent work on comparative (cross-cultural) testing of anthropological theories. II) Next, his fieldwork with Margarete Schweizer in a village in Java, publication of numerous ethnographic articles on Indonesia, and the culminating publication as a book of his Habilitation thesis which qualified him to enter the tenured professorial ranks. III) Third, beginning with some analyses of his Javanese materials, he turned to processual, structural and network analysis and undertook a rigorous integration of ethnographic and comparative work.

I. Cross-Cultural Research 1968-1983

Thomas Schweizer began his career at Cologne in 1968/69 under Dr. Ulla Johansen, became Institute Director in 1973. After completing his thesis in 1975, he published his dissertation on "Methodological Problems of Cross-Cultural Research" in 1978. As a cross-culturalist myself this was when I became aware of his work: we had as a Ph.D. candidate at Irvine, another Cologne student, Waltraud Kokot, and she agreed to help me review the book (in German) for the American Anthropologist (1980). The book was translated and published by HRAF press in 1987. In between Schweizer published a wide

range of cross-cultural studies. Methodologically, he covered data quality controls (1978), the use of scaling, regression, and factor analytic methods (1978a,b, 1980). Theoretically, he tested Whiting's puberty and initiations hypotheses (1978c) and correlates of alcohol use (1981). Finally, in an introduction to *Ethnological Research* (1983), his chapter provided an introduction to cross-cultural methods. His work represented a high point of methodological and theoretical sophistication in the anthropological development of cross-cultural studies.

II. Javanese Fieldwork (1978-), Habilitation (1984) and Cologne Reappointment

Schweizer brought his quantitative, hypothesis-testing orientation to ethnographic analysis in his 1978/9 and 1984 fieldwork with Margarete Schweizer, who was skilled both in ethnography and linguistics. The fieldwork resulted in a large number of publications who ranged from empirical methods in fieldwork (1981), qualitative methods (1987) and economics (1980, 1985, 1989) to issues of stratification (1985). This work cumulated in his Habilitation (Reisanbau in einem javanischen Dorf 1984) which was published in 1989. He moved on to a Heisenberg Stipend at Cologne (1984-86), to a Professorship at Bayreuth (1986) and then a permanent position at Tübingen 1986-1990.

In 1988, with Cologne colleague Hartmut Lang, Schweizer was funded by the DFG to conduct a grand tour of cross-cultural research projects in the U.S. (HRAF, Irvine and elsewhere) as part of a funded research project on causes and consequences of conflict that combined cross-cultural studies with six ethnographic field studies by University of Cologne/Tübingen graduate students. This trip provided my first face-to-face discussions with Thomas, and led to my invitation of the DFG funded conference on conflict in Bad Godesberg. The most enjoyable scholarly year of my life was the subsequent invitation to join Schweizer at Cologne as an Alexander von Humboldt awardee, at Schweizer's nomination. Between cross-cultural, longitudinal, and social networks research, we had a lot in common.

While still at Tübingen, before his reappointment at Cologne as Institute Director, Schweizer's work branched out to include network analysis (1988, 1989), the study of social change (1990) and methods of cognitive anthropology applied to the belief system of a Javanese mystic (1988). His 1989 edited book on Network Analysis: Ethnological Perspectives (in German) included his introduction on network analysis as a modern form of structuralism and chapters on network analysis of his Javanese village kinship, economic and religious ties as well as network analysis by microcomputer.

It was through a friend, K.H. Reuband, that Schweizer's attention was drawn to network analysis very early in his undergraduate years, about 20 years before he started publishing in the field himself. Edward Laumann - back then a visiting professor at the University of Cologne - advocated Clyde Mitchell's book on Social Networks in Urban Situations as opening a new paradigm to structural analysis. A friend told Thomas Schweizer about the book, which greatly influenced his thinking on anthropology. Cologne sociologists Rene Koenig, Erwin K. Scheuch and Rolf Ziegler, another network researcher, also had a major role in shaping Thomas's understanding of social science, as did his study of psychology.

More or less two decades later network analysis, social change, longitudinal studies, world systems, and discrete structure analysis, as an enrichment of ethnographic analysis, came into focus in his own research. His early work on some of the latter topics included studies on process analysis in ethnology (1989), social change in the previous century in Indonesia (1990), trade networks and state

development in the early colonial regimes in Southeast Asia (1991), and radical social change in Communist China (1991).

III. Processual, Structural and Network Analysis: the Directorship years (1990-)

The Cologne Institute of Ethnology built by Johansen and Schweizer functioned as undoubtedly the finest and most cooperative anthropology department it has ever been my pleasure to witness in my 35 year career in anthropology. I made every endeavor to return each year after 1990 to collaborate with an outstanding group of colleagues and students there. In so doing, I became by some accounts Thomas's next closest professional colleague after Hartmut Lang, a friend of the Schweizer family, host to Nikolaus Schweizer's "semester abroad," and a kind of 'working member' of the Institute.

These years, in spite of the new administrative burdens as a much beloved director of the Cologne Institute, were Thomas's most productive. Not only was he able to continue his studies of Javanese social networks (cited above) and ritual organization (1993), but he was able to open up a number of new initiatives. These included: 1) processual analysis (subject of a 1989 article), 2) the development of network and discrete structure approaches to thinking relationally about fundamental problems in social anthropology, 3) applying networks to cross-cultural analysis as in the conflict project, 4) reopening issues of anthropological method and epistemology at a still deeper level.

After my first return trip to Cologne after working with Duquenne in France on discrete structure analysis, Schweizer began a series of studies we had envisioned together, applying discrete structure and lattice analysis to the problem of the dual structure of property-ownership. His Current Anthropology (1993) and Indonesia Circle (1993) articles were among the most successful applications of Galois lattice analysis to problems in social anthropology. He summarized his comparative results in a 1998 article. In 1996 he applied discrete structure analysis to the longitudinal study of structural change – looking at his revolutionary Chinese village data – in the White and Duquenne (1996) volume on Networks and Discrete Structure Analysis.

My own work on large-scale network and kinship analysis comes directly out of the days when, in a series of Cologne and Paris workshops (my sojourns to Paris being also the result of Thomas's sponsorship for me of a Humboldt stipend), Thomas, Hartmut and I would gather with Vincent Duquenne and other social scientists in Paris to apply discrete structure analysis to social science problems. Watching Thomas grapple with a Galois lattice analysis of his Javanese kinship data led to my realization of a simpler way to model the longitudinal and partial-order relationships inherent in kinship structures, via Paul Jorion's formalization of the p-graph. Later, hearing Hartmut describe his demographic simulation programs to a rapt audience of Parisian ethnologists in Michael Houseman's "Kinship and Computing" workshops, it dawned on me how to do permutation tests of kinship structures as Monte Carlo simulations that controlled for demographic constants while varying marriage choices. Many of the ideas born of those days of workshops and collaborative projects have yet to appear in print, but under Thomas's leadership a whole series of high quality contributions flowed out of Cologne that combined ethnographic research with methodology and theoretical innovations. The Humboldt Foundation and NSF jointly supported Thomas and myself from 1993-95 in a Transatlantic Cooperation program that also involved French scholars such as Degenne, Houseman, and Jorion as well. The 1998 Cambridge press volume on Kinship, Networks and Exchange was one of the results, and the initiation of a series of longitudinal cases studies of large scale social networks for the study of social class, elites, and complex kinship systems was one of the results.

During these years he nominated and won a second A. von Humboldt award for Russ Bernard in 1995-96. What Russ mentions in the preface of his new book reflects the same personal and intellectual hospitality I have experienced. At around the same time Thomas launched a series of new projects. He found that Polly Wiessner (Max Planck Institute, Andechs), who had done Harvard field research on the Dobe !Kung, was willing to share her kinship and economic exchange data for the !Kung. On this project, published in 1996 and 1997 articles, he enlisted Lothar Krempel (Max Planck Institute, Cologne) for his expertise in network visualizing. The results of this project, on !Xharo exchange, was a superb network analysis of an economy embedded entirely within specialized gift-giving exchange relationships.

Schweizer's fluency with conceptual and theoretical issues, combined with flexible and insightful use of a variety of interrelated methodologies, made him a master teacher and researcher. This is reflected in all of his work. Schweizer's depth as a theoretician will become evident in his chapter on "Epistemology: The Nature and Validation of Anthropological Knowledge," which appeared in Russ Bernard's Handbook of Method in Cultural Anthropology (1998). The fieldwork tradition and comparative ethnology have been the unifying threads among the different theoretical and methodological schools in anthropology. How to produce valid descriptions and how to establish comparative theoretical syntheses of these descriptions are among the central epistemological problems. Positivism, hermeneutics and postmodernism/radical constructivism are discussed as major frameworks guiding anthropological research, for which three problems are addressed in terms of focal interrelationships: reality, relativism and truth; empathic *verstehen* and explanation; and theory construction and cumulative knowledge.

The edited volume Kinship, Networks and Exchange (Schweizer and White 1998) encapsulates work being done at Cologne and elsewhere which was presented at a conference he organized in 1994. These studies link the study of decision-making and economic exchange (incorporating rational choice and game-theoretical models) with understanding cultural and individual cognitive schemata that operate within network and social structural constraints to motivate, empower and drive social action observed in richly described ethnographic settings.

His textbook on "Patterns of Social Order: Network Analysis as a Foundation for Cultural Anthropology" (Muster Sozialer Ordnung 1996) reviews the state of network research against the background of the various structuralisms in social anthropology. Noting the neglect of social structure in recent interpretative and postmodern theories of cultural texts, it shows the usefulness of network analysis for studying the social embeddedness of meanings and emergent social order. The final chapters review network explanations on the relations between action and structure, and introduces graph-theoretic statistical procedures for dissecting social ties.

To enable him to continue that scientific track, Schweizer became the first anthropologist to win the Leibniz Award, which is where my reflections began. With these funds he supported graduate and junior faculty research, built up the computing and library facilities of the institute, and invited a series of scholars to provide additional workshops and courses at the Institute. Russ Bernard and Michael Schnegg taught an intensive course on systematic techniques of data collection and analysis in anthropology. Lilyan Brudner and I provided workshops on longitudinal network research and multimedia ethnography. The more lengthy stays from Russ and myself were accompanied with short

term visits from many other network researchers including J. Clyde Mitchell, Lin Freeman, Per Hage, Al Klovdahl, Peter Bearman, and many others.

In partial repayment of the immense generosity shown to us by Thomas and members of the Institute, we hosted a joint project in Costa Mesa – adjacent to the Irvine campus – where 12 Cologne students headed by Thomas as field director carried out a four week intensive field training session in urban network ethnography. The results were published by Schweizer, Schnegg and Berzborn (1998). The project succeeded admirably in the collection of ego-centered network data. The project design of Thomas and the students also included a test of Al Klovdahl's ideas about random-walk networks in urban areas via weak-tie data collection. An on-the-spot reorientation in Irvine towards collecting strong tie social support data undermined that goal, but we learned a great deal about designing urban network research. Thomas had planned to follow up on what we had learned with a further urban network study in Cologne, but that was not to be.

Many social scientists in network studies and anthropology formed lasting ties with faculty and graduates of the Cologne Institute that will continue to produce research influenced by Thomas's vision, support and his many contributions. Joint fieldwork collaborations between UCI and Cologne students in the Costa Mesa studies, for example, led to invitations of several of our students to Cologne where they have formed lasting professional and personal relationships. Conversely, we have invited some of their students and faculty to join our research projects. Thomas's Ph.D. student Michael Schnegg, for example, joined our team doing research on Tlaxcala, Mexico. He is doing a resurvey of our community-level network study of kinship and compadrazgo, and we already have several jointly authored analyses of the previously collected data in press.

It is not only his outstanding scientific abilities that made Thomas Schweizer such an extraordinary colleague. Just as important, he created an atmosphere where creativity and cooperation would grow. These ideas and the ties that grew in this atmosphere will live far into the future.

Bibliography of Thomas Schweizer

Books

1978, "Methodenprobleme des interkulturellen Vergleichs. Probleme, Lösungsversuche, exemplarische Anwendung." Kölner ethnologische Mitteilungen, Band 6. 405 Seiten. Köln und Wien: Böhlau-Verlag, 1978 (=PhD dissertation).

1981, "Wissenschaftstheorie für die ethnologische Praxis." (with H. Lang, B. Riese and G. Gerdsmeier). Ethnologische Skripten, Band 1. 178 Seiten. Berlin: Reimer-Verlag, 1981.

1987, "Methodological Problems of Cross-cultural Comparison." 226 Seiten. New Haven: Human Relations Area Files Press, 1987 (= translation of part 1 of the PhD dissertation).

1989, "Netzwerkanalyse: Ethnologische Perspektiven." (editor). 230 Seiten. Berlin: Reimer-Verlag, 1989.

1989, "Reisanbau in einem javanischen Dorf: Eine Fallstudie zu Theorie und Methodik der Wirtschaftsethnologie." Kölner ethnologische Mitteilungen, Band 9. 720 Seiten. Köln und Wien: Böhlau-Verlag, (=Habilitation).

1993, Schweizer, Thomas, Margarethe Schweizer and Waltraud Kokot (eds.), "Handbuch der Ethnologie. Festschrift für Ulla Johansen." 664 pages. Berlin: Reimer-Verlag, 1993.

1996, "Muster sozialer Ordnung: Netzwerkanalyse als Fundament der Sozialethnologie." 306 pages. Berlin: Reimer-Verlag, 1996.

1998, Schweizer, Thomas and Douglas R. White, "Kinship, Networks and Exchange." Structural Analysis in the Social Sciences Series. New York und Cambridge: Cambridge University Press, 1998.

Papers

- 1978, "Data Quality and Data Quality Control in Cross-cultural Studies." *Behavior Science Research* (New Haven, Conn.) 13: 125-150, 1978.
- 1978, "Statistische Gesetze und statistische Argumentation in der Ethnologie." *Anthropos* (Fribourg) 73: 337-366, 1978.
- 1978, "Lineare Strukturmodelle in der Ethnologie: Eine Einführung in die statistische Kausalanalyse (Teil I)." *Sociologus* (Berlin) 28: 1-35, 1978.
- 1978, "Lineare Strukturmodelle in der Ethnologie: Ein Test von Whittings Theorie der Pubertätsriten." *Sociologus* (Berlin) 28: 149-173, 1978.
- 1980, "Multidimensional Scaling of Internal Differences in Similarity Data: The Perception of Interethnic Similarity in Indonesia." *Journal of Anthropological Research* (Albuquerque, New Mex.) 36: 149-173, 1980.
- 1980, "Konsumverhalten im ländlichen Java." *Sociologus* (Berlin) 30: 123-153, 1980.
- 1980, "Regressions- und Faktorenanalyse ethnologischer Daten." *Zeitschrift für Ethnologie* (Berlin) 105: 1-31, 1980.
- 1981, "Alkoholkonsum im interkulturellen Vergleich." In: G. Völger und K. von Welck (Hg.), *Rausch und Realität: Drogen im Kulturvergleich*. Köln: Rautenstrauch-Joest-Museum, 76-84, 1981. 2. Auflage Reinbek: Rowohlt Taschenbuch Verlag, 134-152, 1982.
- 1981, "Die empirische Methode der Ethnologie: Feldforschung am Beispiel einer Dorfstudie auf Java." *Sociologus* (Berlin) 32: 20-42, 1982. Gekürzte Fassung in *Mitteilungen der Universität zu Köln, Sonderheft Universitätstage 1981*, 17-21, 1981.
- 1983, "Interkulturelle Vergleichsverfahren." In: H. Fischer (Hg.), *Ethnologie: Eine Einführung*. Berlin: Reimer-Verlag, 427-445, 1983. 3. rev. Auflage, 421-39, 1992.
- 1985, "Soziale Schichtung im kolonialen Java." *Anthropos* (Fribourg) 80: 153-183, 1985.
- 1985, "Die Vielschichtigkeit der Feldsituation: Untersuchungen zur dörflichen Wirtschaft in Java." In: H. Fischer (Hg.), *Feldforschungen*. Berlin: Reimer-Verlag, 263-288, 1985.
- 1986, "Kontinuität und Wandel im Reisanbau: Eine Fallstudie aus Klaten/ Mitteljava." In: H. Dürr und R. Hanisch (Hg.), *Südostasien: Tradition und Gegenwart*. Braunschweig: Westermann-Verlag, 203-220, 1986.
- 1987, "Das Entziffern einer fremden Kultur: Java als ethnologische Herausforderung." In: *Wissenschaft im Spannungsfeld zwischen den Kulturen*. Schriften der Universität Bayreuth, Nr. 1. Bayreuth: 59-79, 1987.
- 1987, "Agrarian Transformation? Rice Production in a Javanese Village." *Bulletin of Indonesian Economic Studies* (Canberra: Research School of Pacific Studies, ANU) 23: 38-70, 1987.
- 1988, "Einen javanischen Mystiker verstehen: Kognitive Analyse von Überzeugungen über heilige Orte (tempat keramat) aus Majapahit." *Anthropos* (Fribourg) 83: 47-67, 1988.
- 1988, "Detecting Positions in Networks: A Formal Analysis of Loose Social Structure in Rural Java." *American Anthropologist* (Washington, D.C.) 90: 944-951, 1988.
- 1989, "Netzwerkanalyse als moderne Strukturanalyse." In: Th. Schweizer (Hg.), *Netzwerkanalyse*. Berlin: Reimer-Verlag, 1-32, 1989.
- 1989, "Verwandtschaftliche, wirtschaftliche und religiöse Verflechtungen javanischer Haushalte: Eine positionale Netzwerkanalyse." In: Th. Schweizer (Hg.), *Netzwerkanalyse*. Berlin: Reimer-Verlag, 113-132, 1989.
- 1989, "Netzwerkanalyse mit dem Mikrocomputer" In: Th. Schweizer (Hg.), *Netzwerkanalyse*. Berlin: Reimer-Verlag, 201-222, 1989.
- 1989, "Economic Individualism and the Community Spirit: Divergent Orientation Patterns of Javanese Villagers in Rice Production and the Ritual Sphere." *Modern Asian Studies* (Cambridge) 23: 277-312, 1989.
- 1989, "Perspektivenwandel in der ethnologischen Primär- und Sekundäranalyse: Zur historischen und zur gegenwärtigen Methodik des interkulturellen Vergleichs." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* (Opladen) 41(3): 465-482, 1989.
- 1989, "Prozeßanalyse in der Ethnologie: Eine Exploration von Verfahren und Problemen." *Zeitschrift für Ethnologie* (Berlin) 114: 55-74, 1989.

- 1990, "Männerbünde und ihr kultureller Kontext im weltweiten interkulturellen Vergleich." In: G. Völger und K. von Welck (Hg.), *Männerbünde - Männerbände: Zur Rolle des Mannes im Kulturvergleich*. Köln: Rautenstrauch-Joest-Museum, Band 1, 23-30, 1990.
- 1990, "A Century of Change in the Javanese Rural Economy: Contrasting Developments in Upland and Lowland Klaten." *Internationales Asienforum/ International Quarterly for Asian Studies* (München) 21(1-2): 259-277, 1990.
- 1990, "Margaret Mead und Samoa: Zur Qualität und Interpretation ethnologischer Feldforschungsdaten." In: B. Illius und M. Laubscher (Hg.), *Transpacifica: Festschrift T.S. Barthel*. Frankfurt: P. Lang Verlag, 441-53, 1990.
- 1991, "The Power Struggle in a Chinese Community, 1950-1980: A Social Network Analysis of the Duality of Actors and Events." *Journal of Quantitative Anthropology* (Dordrecht) 3: 19-44, 1991.
- 1991, "Handelsnetze und Stadtentwicklung in Südostasien: Benkulen im Zeitalter der kolonialen Expansion, 1685-1824." In: W. Kokot und B.C. Brommer (Hg.), *Ethnologische Stadtforschung*. Berlin: Reimer Verlag, 45-74 (mistakes in the reprint), 1991.
- 1993, "Ritual as Action in a Javanese Community: A Network Perspective on Ritual and Social Structure" (with Elmar Klemm and Margarete Schweizer). *Social Networks* (Amsterdam) 15: 19-48, 1993.
- 1993, "Perspektiven der analytischen Ethnologie." In: Th. Schweizer, M. Schweizer und W. Kokot (Hg.), *Handbuch der Ethnologie. Festschrift Ulla Johansen*. Berlin: Reimer-Verlag, 79-113, 1993.
- 1993, "The Cultural Use of Things: Consumption in Rural Java." *Indonesia Circle* (London) 61: 3-20, 1993.
- 1993, "The Dual Ordering of Actors and Possessions." *Current Anthropology* (Chicago) 34: 469-483, 1993.
- 1993, "Die Sozialstruktur als Problem der ethnologischen Forschung." *Zeitschrift für Ethnologie* (Berlin) 117 (1992): 17-40, 1993.
- 1996, "Actor and Event Orderings Across Time: Lattice Representation and Boolean Analysis of the Political Disputes in Chen Village/ China." *Social Networks* (Amsterdam), Special Issue on Discrete Structure Analysis, 18: 247-66, 1996.
- 1996, "Reconsidering Social Networks: Reciprocal Gift Exchange Among the !Kung." *Journal of Quantitative Anthropology* (Dordrecht) 6: 147-70, 1996.
- 1997, "Embeddedness of Ethnographic Cases: A Social Networks Perspective." *Current Anthropology* (Chicago) 38(5):739-60, 1997.
- 1998, Schweizer, Thomas, Michael Schnegg and Susanne Berzborn: "Personal networks and social support in a multiethnic community of Southern California". *Social Networks* (Amsterdam) 20:1-21, 1998.
- 1998, Schweizer, Thomas and Douglas R. White, "Revitalizing the Study of Kinship and Exchange with Network Approaches". In: T. Schweizer und D.R. White (Hg.), *Kinship, Networks and Exchange*. Cambridge: Cambridge Univ. Press, 1998.
- 1998, White, Douglas R. and Thomas Schweizer, "Kinship, Property Transmissions, and Stratification in Javanese Villages.". In: T. Schweizer und D.R. White (Hg.), *Kinship, Networks and Exchange*. Cambridge: Cambridge Univ. Press, 1998.
- 1998, "Epistemology: The Nature and Validation of Anthropological Knowledge." In: H.R. Bernard (Hg.) *Handbook of Method in Cultural Anthropology*. Walnut Creek, CA: AltaMira Press (Sage), 1998.
- in press, "Besitzstrukturen: Eine vergleichende Analyse." *Archiv für Völkerkunde* (Wien). 1998.
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