CHAOS IN SOCIOLOGY

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Frequently when a new mathematical theory comes out enough to attract the attention of consumers of mathematics (i.e., people who may apply but not create mathematics) sociological theorists will ask how the new stuff can be useful to their work. Von Neumann's theory of games attracted much attention in the 1940s. In the 1950s it was Harary's work with graphs (especially his structure theorem) that caught their attention, and of course Henry himself helped when he co-authored a book on structural models. In the 1970s René Thom's brilliant discoveries about catastrophic change was followed by Zeeman's imaginative applications, e.g. to riots. I have not yet heard of anyone applying fractals but no doubt their time will come.

The subject of several recent technical and popular works is chaos. In his book The Dreams of Reason the late Heinz Pagels presented a review of "The Computer and the Rise of the Sciences of Complexity." I was startled by his statement that "A major new development has occurred in physics -- scientists discovered chaos in deterministic equations" (Chapter 3). That sounds like a contradiction in terms. Let us look more carefully at the words. Roderick Jensen, a physicist at Yale, defines "chaos" as "the irregular, unpredictable behavior of non-linear dynamic systems." The equations referred to are non-linear. Technically, a non-linear equation is one in which the sum of two solutions is not necessarily itself a solution. Non-technically, this means that they are damned hard to solve and just a slight variation in initial conditions can lead to enormous variation in numerical solutions.

Most of the early studies in chaos came from weather forecasting. At one time it was thought that perfectly accurate weather forecasts only awaited fast enough, powerful enough, computers. Information on conditions around the world is available. And after all, the weather is basically just the result of moving air.
masses and we have long known the equations governing the flow of gases. Given sufficient information about the position, temperature and moisture content of the various masses of air over the globe we should be able to plot their paths and thus predict the weather in any particular place at a given time in the future. It was just a matter of entering the initial conditions and solving the equations; a piece of cake as our students say! Not just prediction but control seemed within grasp.

Alas! It was not to be. Weather is subject to "the butterfly effect". As mentioned, the equations involved are non-linear, and it is characteristic of such equations that a slight variation in initial conditions can make for a very large difference in outcomes. So the way a butterfly folds its wings in Bangkok may affect the future weather in Birmingham. Even though we have very good information about conditions around the globe, it cannot be perfect, so a guess that is very well based and reasonable may turn out to be completely wrong.

We must avoid the elementary (but common) mistake of confusing "weather" with "climate". Weather consists of the day-to-day conditions; climate is the long term result. Though we cannot predict the weather, we can make predictions about the changing climate. For example, we can foretell the consequences of an increase in "the greenhouse effect" as more carbon dioxide and smoke accumulate in the air, from fossil fuel use and the burning of tropical forests.

What has this to do with sociological theory? We have been told by many philosophers of science that the true mark of a good theory is its ability to make accurate predictions. Sociology has not been notably successful in this regard, especially as applied to individuals. There are just too many "butterfly effects"! But this failure does not mean -- as some have claimed -- that human behavior is not governed by deterministic laws. Such laws may be used to explain behavior after the fact. Further, we may appeal to the analogy of weather and climate. We may not be able to tell how a given individual will vote, or choose a product but surveys are reasonably accurate in predicting the outcome of elections and consumer behavior.

The "sciences of complexity" are in their infancy. For accessible accounts see James Gleick's Chaos: Making a New Science (Viking, 1987) and Pogge: The Dreams of Reason (Simon and Shuster, 1988). Both books have fleeting reference to the many applications of chaos in areas like population biology, neurology, liquid flows and the dynamics of pendulums as well as meteorology. Suggested applications to sociology are skimpier.

Differential association may be a good candidate. This concept was originally developed to explain how individuals decide to follow a criminal career. Even in high risk "criminogenic" neighborhoods, not everyone becomes a criminal. Some criminologists (e.g., the Glucks) have tried to predict from early childhood behavior which individuals are most likely to go wrong, but they have not been very successful. This need not mean their criminological theories are wrong; they explain even if they do not predict.

Marxism may be another candidate. Karl Marx made many predictions about the course of history. Some modern critics scornfully point out that his expectations about the loci of revolutions (in advanced countries like Germany and England, rather than backward countries like Russia and China) were quite wrong. They therefore conclude that Marxist theory must be wrong. But this is not necessarily the case. Perhaps some unforeseeable incident (like the assassination at Sarajevo) was a butterfly event (if the war hadn't intervened there may have been a successful socialist revolution in Germany). It is thus conceivable Marx's proposed laws are right even though his predictions turned out to be wrong.

In a recent issue of Sociological Theory (Fall, 1988) Andrew Abbot suggested that sociology must transcend the General Linear Reality model. Most of the popular "structural equation" models are linear. For chaos to be an operative factor the equations governing behavior must be non-linear. Of course when we say "non-linear" we are talking about an enormous variety of possible models but we can start our investigations with very simple kinds. Speaking of physics, Fermi once remarked that there was no commandment which said laws had to be linear; surely the same thing could be said about the laws of sociology.

"Chaos in sociological theory" may take on a whole new meaning. Readers are asked to consider other ways sociological theorists might apply the concept of chaos.

Upcoming Conferences

ASA Meetings

The Theory Section Miniconference will be held on August 13, at the ASA meetings in San Francisco. Miniconference participants will be Jeffrey Alexander, Roslyn Bologn, Alex Dwyer, Richard Flacks, Martin Jay, Jerome Karabel, Charles Lenert, George Ross, Dorothy Smith, and Ivan Szelnyi. We look forward to seeing you there!
Theory Growth and the Study of Group Processes

A second annual one-day conference on group processes will be held at the Stanford University campus on Tuesday, August 8, 1989, just before the start of the ASA meetings in San Francisco. The theme of the conference will be "Theory Growth and the Study of Group Processes." Joseph Berger and Morris Zelditch are the conference co-chairs. Papers on theory growth will be presented by: (1) Morris Zelditch and Henry Walker; Edward Lawler; and Guillermo Jaques; with Murray Webster serving as discussant. Papers on theoretical integration will be presented by Karen Cook, Linda Mohr, and Toshio Yamagishi; David Willer and Barry Markovsky; and Tom Parneto and John Skovetz; with Jonathan Turner serving as discussants. All meetings will be held in the Auditorium, Herbert Hoover Memorial Building, which is being made available through the Hoover Institution.

*** Special Announcement ***

Alan Sica has been named the next editor of Sociological Theory. Alan will be taking over from Norbert Wiley at the first of next year. Thanks to Norbert Wiley for a job well done! And congratulations to Alan Sica at the outset of an important enterprise.

International News

British Sociological Association Theory Group Conference

Roy Boyne

Newcastle Polytechnic was the venue for our June 1986 conference on "Marxism and Social Change." Overall the papers and discussions served to illustrate once again the contemporary intellectual crisis of Marxism.

John Urry opened the proceedings with a very useful summarizing paper titled "Class, Causal Powers and the Analysis of Space." His articulation of recent theories of social space with the concept of class led to the enumeration of a set of "spatial" conditions necessary for class actions.

Chris Bryant's analysis of Polish Solidarity raised a set of crucial issues bearing on the analysis of social movements. In particular, his understanding of Solidarity as a "self-limiting" movement which would press for state reform but would accept the position that the state has a legitimate preserve, may well be a basis for understanding the medium term future of the movement.

Edmund Mokrzychki, Deputy Director of the Polish Academy of Sciences, supported much of Professor Bryant's analysis, and, in his presentation, concentrated on the changes undergone within the field of Marxism. According to Mokrzychki, the official ideology of Marxism-Leninism still defines, for most East Europeans, what Marxism is. But that ideology has little place within the academic context, where there has been a converging of a more open Marxism and sociology. Following his analysis, Professor Mokrzychki unleashed a series of revelations arising out of recent empirical work. Particularly striking was the statement that 33% of respondents in one recent survey thought that only those "without brains or guts" were not planning to leave Poland. He left the delegates with the sense that the Polish people, particularly in the cities, were unable to understand or repair a society in a relatively advanced stage of economic breakdown. Paradoxically, however, he suggested that Poland was becoming an unscrupulous entrepreneur's paradise.

Godfried van Benthem van den Berg, from the Institute of Social Studies in The Hague, presented the most optimistic vision of the medium term future. Explicitly rejecting the Marxist view that international change is epiphenomenal to economic structure, he argued that military nuclear power is now functioning as a global mechanism for political restraint and for the establishment of a new and developing international order. The Marxist view of history as a series of modes of production is effectively discarded in so far as the analysis of future possibilities is concerned. For, he suggested, we are possibly on the brink of an epoch shift, which is underpinned by countervailing military strength, the defining feature of which is that the less it is used the greater the pressures toward increases in international trust.

Nicol Mouzolli closed the conference with a paper which first recontextualized some classical Marxist formulations from a political rather than an economic standpoint, and then applied the resulting analytical framework to the history of Greece and Argentina. Many of those in the audience were persuaded by his view that shifts in the history of these societies are better accounted for in terms of an altering mode of political domination, rather than in the terms of economic transformation.

The next British Sociological Association Theory Group conference will be at Bristol University, January 4-5, 1990. The theme will be "Sociology and the Human Condition." This event is being arranged jointly with the Sociology of Religion Study Group of the ESA.
Simmel Studies in Europe

Donald N. Levine
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Simmel Studies were alive and well in Strasbourg in mid-September, where scholars from ten nations and half as many disciplines spent two days discussing such topics as Simmel’s aesthetics; his views on time, metropolitanism, and modernity; his impact on the social sciences in several countries; his methodology in Philosophie des Geldes; his receptivity to Darwinism and Volkpsychologie; and his special relationship to the artists and intellectuals of his day.

The third such international conference on Simmel held in Europe in this decade, this colloquium was co-sponsored by the Sociology Department at Bielefeld and the Social Sciences Faculty at Strasbourg. Papers from the first two conferences have now been published by Soziokamp Verlag, under the titles Georg Simmel und die Moderne: Neuen Interpretationen und Materialien, edited by Heinz-Jurgen Dahme and Othelin Rammstedt (1984) and Simmel und die jüngeren Soziologen: Neue und Distanz zu Durkheim, Tonnies, and Max Weber, edited by Othelin Rammstedt (1988).

Vivid symbolism colored the occasion. Not only did Simmel spend his last four years at Strasbourg, de died there in 1918 and the 70th anniversary of an author’s death now marks the time when German copyright laws permit unrestricted reproduction of his publications. So the memorial colloquium also served to celebrate the inaugural of a massive publication project which a team of scholars centered at Bielefeld has been pursuing for decades. Organized into 24 volumes, the Georg Simmel Gesamtausgabe will include, in addition to critical editions of all the works published during and after his lifetime, previously unpublished writings, transcripts of his lectures, correspondence, and a comprehensive bibliography and index. Soziokamp will publish the series at the rate of about two volumes a year, starting with Volume 2 (Aufsätze 1887-1890) and Volume 6 (Philosophie des Geldes).

The Strasbourg Colloquium papers will, of course, be published simultaneously in French and German. The Conference also called attention to an upsurge of Simmel translations in France, Italy, and Japan. (Here is a good trivial question: In what language were more of Simmel’s writings translated that by any other by the year 1923? [Answer: Russian]

Review Article

Recent Canadian Sociology

Ruby Ann Pius
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Sociology in Canada is, with anthropology, a young science, having only a few years before the 1920s. Psychology, economics, and political science were all established disciplines in Canada much before then. In the mid-1920s sociology emerged in many universities with an influx of Ph.D. holders and candidates; largely from the United States in the case of English-speaking Canada, and largely from Europe in the case of Quebec, which is most of French Canada. (Quebec also has an anglophone minority, with its own universities.) In the 1960s many new universities were produced, with more immigrant faculty from the U.S. and around the world. By the 1970s some critical thinkers were seeking a distinctive Canadian sociology to cope with American content of the economy in Canada. Two unique Canadian approaches emerged, one in Quebec, and the other in anglophone Canada.

Sociology in Canada is plagued with the tensions of Canadian society as a whole. The English Canadians and the French Canadians each live largely in their own worlds, ignoring the other and its ideology. Both English and French Canadians have attempted to modernize by changing from elite to egalitarian educational systems. University expansion gave more people, especially middle class people, access to positions of power within their own society. The distinctive features of Canadian sociology resulted from declining Britishness, a growing Quebec left-of-center nationalism, and the pursuit of some autonomy from a broadly-felt U.S. imperialism. Anglophone sociology characteristic of most of Canada and Francophone sociology characteristic chiefly of Quebec, can be treated separately.

English Canadian sociologists have tried to develop their own unique view of Canadian society. This network of sociologists has thrived around the journal Studies in Political Economy. This school is concerned not only with political power and economic power, but also with ideologies, and has become largely neo-Marxian. It is strongly interested in the power of U.S. based multinational corporations. A good example is Patricia Marchak’s In Whose Interests (1979).

Initially, however, hierarchy in Canadian industry was explained in terms of human capital theory. In Canadian sociology the seminal work is John Porter’s The Vertical Mosaic (1965). Following C. Wright Mills, Porter traced the origins of Canada’s elites, finding that the commercial and financial elite was a comparatively closed and self-recruiting group. One of Porter’s main points

** News Brief **

Stephan Fuchs will be moving from the University of California at Riverside to the University of New Hampshire.
was that at the higher levels of Canadian society there was a virtual exclusion of everyone not of British descent. The industrial elite was less tightly controlled by the Eastern establishment. American or Canadians in the service of American multinationals came from a broader base. He showed that Canada needed to import some skilled foreigners for top jobs in certain economic sectors as well as some higher places in the civil service, in part because of the elite nature of Canadian universities. As a consequence of the distribution of educational attainment, Porter found, the various ethnic groups each had a place in the prestige and income hierarchy. Hence a vertical mosaic of ethnic niches. Italians and French Canadians were near the mosaic's bottom.

Wallace Clement, a student of Porter's, repeated Porter's analysis a generation later, using data from the 1970s only to show the business elite had become more closed. In addition, he introduced a Marxist demonstration of elite control over the media and political recruitment. Clement found a study of American elite circles in branch plants, and found their backgrounds were varied. Many Canadian sociologists followed Clement's lead, working out a theory of the origin of Canada's dependency on the United States. At first the school ignored the traditional Canadian financial and commercial elites for the difficulty which hedging Canadian industrialists had in raising capital in Canada. Some Canadian sociologists consequently turned to the theory of dependency developed by A.G. Frank for Latin America. Their analysis proved inadequate because Canada, while a colony of U.S. imperialism, is both rich and a democracy. In the early 1980s, Carl Lien and others began to say that the high wages of workers extracted by Canadian and American unions was another barrier to the expansion of Canadian-owned industries. The political economy school became more classically Marxist, taking a look at the society as a whole system, with its own contradictions.

More recent criticism of Canadian dependency theory by Leo Johnson points to the numerous independent commodity producers in Canada in the form of the family farm. Primitive accumulation had never taken place. Even today the petite bourgeoisie of the family farm is about as prevalent as the capitalist farmer.

French Canadian sociologists also attempt to resist American interpretation of their society. In the 1930s two American sociologists, Everett Hughes and Homage Miner, had interpreted Quebec to the anglophone world in terms of it being a traditional society. At this time world sociology debated traditional verses modern values. During World War II French Canadians were ambivalent about this alien view, accepting the facts but trying to reject the valuable implication of the foreign theory. Some young intellectuals including Pierre Trudeau set out to modernize French Canadian society by adopting Parsons' idea of Universalism, which meant that individuals are hired and promoted on the basis of their ability. The goal was to modernize French Canadians so that they could better succeed in the human capital market. In the early 1960s the American theory of universalism was used to create a modern school system in order that elite recruitment might be broadened. This ideology did not bring French Canadian jobs in the management of Quebec-based multinationals, and a left-of-center nationalist political party emerged, accompanied by a nationalist and Marxist sociology at the university and colleges. The sociology department at Laval University in Quebec city had helped to break up the credibility of traditional culture and authoritarian government. The older sociologists involved in the creation of left-of-center ideology are Marcel Rioux and Bernard Dumont. (In contrast, Guy Rocher was a functionalist and a federalist.) Rioux has attempted to develop a French Canadian ideology leading into post-industrial society with values of community taken from French Canadian traditional culture. Sociologists at the Universite de Montreal later began to debate the nationalism question in terms of neo-Marxist theory. The older generation of scholars allowed for traditionally interpreted Marxist ideology. Doiney's and Rioux's argument was that the French Canadians in Quebec were an ethnic class, and hence, class methods of activism could prevail. Today the full range of sociological research is practiced. Nationalism and neo-Marxist thought were two dominant features of sociology from about 1964 to 1984. For about 5 years young French Canadians sought perspectives created to deal with Francophone exclusion from control of their own nation. But these neo-Marxist beliefs are being questioned in light of the glaring individualism of the working class with its scramble for jobs. At present the authors most significant to young French Canadian sociologists appear to be: Foucault, Habermas, and Offe. They seek to join micro-sociology and macro-sociology as do many Anglophones. This French Canadian present has its own network with the Association d'economie politique. Its meetings have tried to evaluate a turn toward management.

The sociologists in both French and English Canada are struggling to find concrete evidence of what laymen think about society. In both theoretical communities the change in management-worker relations has led to studies of actual class relations and consciousness. The conviction that one can make a better society by mobilizing the working class is being evaluated by independent researchers. Some outstanding work in mainstream sociology has attempted to evaluate whether Canada has classes delineated by their own points of view. Today Ormskirk and Johnston are doing excellent work in showing just how complex our ideas about class should become.


Call for Papers

CURRENT PERSPECTIVES IN SOCIAL THEORY

Current Perspectives in Social Theory announces a call for papers on a range of issues in contemporary social theory. Published annually, Current Perspectives in Social Theory is a journal-of-record in social theory, featuring high-quality papers from sociologists and others who work on issues of theoretical relevance. At issue, Current Perspectives will reflect the increasingly interdisciplinary nature of theoretical writing, both within social science and bridging social science and the humanities. In addition to publishing work deriving from the sociological "classics" (e.g., Durkheim, Weber, Marx), Current Perspectives welcomes work in less orthodox intellectual currents (including critical theory, feminist theory, poststructuralism, phenomenology and hermeneutics) especially as these fertilize sociological discourse. Submissions and inquiries should be directed to the editor: Ben Agger, Department of Sociology, 430 Park Hall, SUNY-Buffalo, Buffalo, New York 14260. Deadline for papers for the 1990 volume is August 15, 1989.

FOUNDATIONS

Joseph Gutier
George Mason University

I am pleased to announce the forthcoming appearance of a new journal, Foundations. An International Journal for the Philosophical Foundations of Social Knowledge and Social Practice, published by Garland Publications. We invite manuscripts for the semi-annual journal, with the first issue to appear in February 1990. One number of each volume will be devoted to the philosophical analysis of cognitive, methodological and applied aspects of the major theoretical orientations and families of reference in each of the social disciplines — cultural anthropology, economics, sociology, political science, history, social psychology, human geography, and formal education. The other number of each volume will consist of assorted articles relevant to the generic topic of the Journal. All manuscripts will be reviewed by selected members of the editorial board which consists of leading scholars in each of the social disciplines and philosophy. For further information, contact Joseph B. Gutier, Editor, Foundations, Room 3609 Robinson Hall, George Mason University, Fairfax, Virginia 22030; (703) 273-3284.

THE LIBRARY OF SOCIOLOGY SERIES

Manuscripts and proposals in sociology and related disciplines are solicited for The Library of Sociology Series, Garland Publications. The series welcomes a wide variety of reference works such as research handbooks, annotated bibliographies, sourcebooks, etc., in various branches of sociology. Studies on a broad spectrum of issues of contemporary interest will be considered. Manuscripts and proposals should be directed to the series editor: Dan A. Chokli, University of Winnipeg, 515 Portage Avenue, Winnipeg R3B 2E9 CANADA.

SOCIAL STATISTICS SYLLABI

Louis Gaydosh requests course syllabi, projects, assignments, and other materials that might be of use in revising the ASA Teaching Resource Center's syllabus and materials collection for undergraduate social statistics. Her address is Louis R. Gaydosh, Department of Computer Science and Quantitative Analysis, Willam Paterson College, 300 Pompton Road, Wayne, New Jersey 07470.

Meeting Announcements

SOCIETY FOR APPLIED SOCIOLOGY

The Society for Applied Sociology will hold its seventh annual meeting at the Sheraton DTIC in Denver, on October 20-22, 1989. The theme of the conference will be "The Policy Relevance of Applied Sociology." For further information, contact Dr. Penelope Carsen, Department of Sociology, University of Denver.

Book Announcements


Lawrence Hasselblatt, a three volume set on Social Science and the Challenge of Relativism, from the University of Florida Press.


Volume 3. Culture of Nature (forthcoming)


One hypothesis doeth not a theory make!