RESEARCH IN SOCIAL SCIENCE AND HEALTH IN CANADA, 1960–1969

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The past ten years have witnessed a rapid increase in the volume of sociomedical research in several countries. In the United States the government support of research in social science and health has prompted the development of areas of subspecialization within several of the social sciences; several journals now serve as a means of communication for this growing research community. Canadians have contributed to the body of research in social science and health. At centers across the country a considerable number of research investigations is now underway. This review discusses some of the published and current research in each of four areas. These studies are: the health professions, mental health, medical care and the organization of health services. This review briefly appraises some aspects of the research methodologies used.

THE HEALTH PROFESSIONS

Sociologic investigation of the health professions was started by Oswald Hall and reported in 1948 in his study, "The Stages of a Medical Career" and in other related papers.[1] Subsequently, research in the sociology of professions has accorded a significant place to Hall's work. The studies that have been completed in the 1960's have focused on three topics: medical education (Anderson,[2] Mount and Fish[3] and MacFarlane[4]); the

general practitioner (Clute[5] and Wolfe[6]); and medical manpower (Judek[7]). Although each of these studies was a major research effort, they may be regarded as significant in their substantive findings, and were aimed primarily at providing relevant information that might contribute to the formulation of policy. The current investigations of the Committee on the Healing Arts promise to produce useful reports on aspects of training and regulation in the health professions in Ontario.

It seems reasonable that such efforts at basic documentation should precede theoretical studies. However, often the research techniques that have been used might have been improved. Clute's study, for example, provided a detailed description of the practices of 86 general practitioners, and an evaluation of the quality of their work, but the findings were presented at a low level of generalization, in part because of the difficulty of studying medical practice in depth. In contrast with the extensive sociologic literature in the United States, only a few Canadian studies of the health professions make a substantial contribution to the sociology of professions. This may reflect differences in commitment, the small number of scholars involved, as well as the fact that in only two of the studies cited were sociologists involved. If these efforts are considered collectively, it appears that when social scientists or physicians have analyzed the health professions during the past decade, their primary focus was to solve practical problems, such as the supply and training of physicians.

MENTAL HEALTH

Research in mental health has attracted considerable attention in Canada and has moved in two directions: descriptive epidemiology of mental diseases; and an analysis of the relation between social and environment factors and mental illness. In the latter area, two field investigations have been published: Eaton and Weil's study of the Hutterites in Western Canada,[8] and Leighton's study of Stirling County, Nova Scotia.[9]

A considerable advance over the earlier work by Eaton and Weil, Leighton's study is a serious effort to develop indicators of community social disorganization, to measure and screen for mental disorder symptom patterns and to develop a theoretical model to explain the links between social environment, life experience and mental disorder. Both studies are important theoretical and empirical contributions because they attempt to provide a model of illness located in a community and to combine this model with thorough field investigations. The Yorklea Community Study, recently completed in Toronto by Coates, fits into this tradition, and goes beyond it to study the patterns of help-seeking. Epstein and Westley have completed an extensive investigation of the family structure, its organization and its function, and their relation to emotional health.

The area of descriptive epidemiologic research that has included several studies of hospitalized psychiatric patients has on occasion had little theoretical exposition. Richman's study of patient movement in mental hospitals was based on data collected by a national reporting scheme established by the Dominion Bureau of Statistics.[10] The study provides a macroscopic view of patients moving through mental hospitals in Canada. Although no hypotheses were tested explicitly, the statistical treatment of the data is sophisticated. Hobbs, Wanklin and Ladd selected cohort groups of mental patients from three different time periods, examined their patterns of discharge from mental hospitals and assessed the effects of different methods of treatment on readmission rates.[11] Smith, McKerracher and McIntyre have reported a controlled experiment designed to test whether an open-ward general hospital with good nursing facilities and modern treatment can cope with all kinds of psychiatric patients.[12] Their conclusion was that this type of treatment was both possible and preferable for selected illnesses than were standard forms of care. The Cummings' study, *Closed Ranks,* an assessment of the effectiveness of a mental health education program, is a significant

piece of evaluative research, and is derived from and contributes to social science theory and methods.

Current studies in the mental health area deal most frequently with the descriptive epidemiology of mental illness. An unpublished study by Cassell, Fraser and Spellman in Saskatchewan, "Psychiatric Morbidity and Utilization of Medical Care Insurance," reports that although a relatively large proportion of the community studied experienced psychological problems, none received formal psychiatric therapy within the context of the medical care insurance program. At the Killam Workshop on Research Problems in the Social Psychiatry of the East Arctic, held at Memorial University in February, 1969, papers were given on "Psychiatric Research with Small Populations" (Kedward) and "The Characteristics of Hospitalized Psychiatric Eskimo Patients from the East Arctic" (Sampath). At the University of Saskatchewan, McKerracher and Bjornson are conducting a controlled study of children who have a psychotic parent.

Wanklin and Beck are currently studying the distribution of psychiatric disorders on Prince Edward Island. Their work is a retrospective follow-up of cohorts of mental hospital first admissions, and attempts to establish a psychosocial case register. At the University of Calgary, Al-Issa is reviewing research related to sociocultural factors in schizophrenia. Blair has recently completed a comprehensive study of mental health for the Province of Alberta.

From this partial review, it can be seen that work has begun in several areas that will both contribute primarily to the operation and planning of mental health treatment facilities and add to the knowledge of the social variables associated with mental illness.

MEDICAL CARE

The research focus of this area examines the receipt of health services and may be restricted to a description of the experiences of various populations with health care systems, or on occasion

may go beyond this to consider the factors that have influenced the utilization of and attitudes toward health services. Several ongoing studies are devoted to this second focus.

Research in medical care frequently makes use of the idea of social class as a basis for differentiating study population subgroups.[13] Badgley and his colleagues have made a small rural town in Saskatchewan the object of several studies through time. "Wheatville" has served as a laboratory for investigations of the web of the health and welfare system, the patterns of utilization of medical care and the impact of universal health insurance on patterns of utilization.[14] Information was obtained for the entire population of a small town through two field surveys (1960 and 1965), the cooperation of the administration of the provincial hospital and medical care insurance schemes, from the records of local doctors and public health personnel and from demographic records. One report in this series, "Voluntary Health-Related Behaviour in Wheatville," provides a clear theoretical and operational definition of major ideas.

Current studies include those by: Matthews of the University of Saskatchewan, who is studying the utilization of all health services and facilities in selected communities as part of the International Collaborative Study of Medical Care Utilization; Hastings and Mott's analysis of the differential impact of various forms of health insurance on the receipt of medical care at Sault Ste. Marie in which one of the studies is a prospective analysis of the utilization of medical and related services obtained by a steel company's employees and their dependents (22,000 total); MacCreary and Anderson of the University of British Columbia who are examining the relation between manpower resources and the utilization of medical, dental, nursing and pharmacy services for health care; Larson of the University of Alberta who is working on the nonutilization of health services and seeking to develop a more precise study of how people cope with illness; Elliott's project on health attitudes and the utilization of health services in Nova Scotia; and

the Castonguay Commission on Health and Welfare in Quebec, which has given considerable attention to the economics of medical care.

This brief review of current studies in medical care indicates that the few researchers in the field are using sociologic variables such as perception of health status and attitudes toward services as intervening variables that help explain variations in the pattern of utilization of health services. The examination of service records had previously provided the demographic characteristics of users and nonusers. Now, these intervening variables are being measured by means of scaled items on questionnaires.

THE ORGANIZATION OF HEALTH SERVICES

Because organizational analysis is a well developed field in sociology, the social scientist is equipped to do empirical research in the organization of health services. In the United States, a considerable body of literature has been produced, including such topics as the study of the hospital as a social system, the coordination of agencies in a health service system and the relation between the hospital and the community.

In contrast, a review of the Canadian literature reveals that thus far, few studies have dealt with these issues from this perspective. In the 1960's the Royal Commission on Health Services has been the major source of research relating to the organization of health services.[15] One of this massive Commission's reports (28 in all), *Organized Community Health Services,* was undertaken to suggest ways for more effectively coordinating the planning and provision of organized community health services, and for improving the coordination of these with other health and welfare services. This study is representative inasmuch as it relies for its information on the peer judgment of investigators who were experienced in handling practical issues, but who do not usually subject their analyses to rigorous empirical investigation.

The organization of medical practice is becoming an important area of concern. Clute,[5] one of the few anywhere to deal in depth with medical practice, formulated his research task in a manner that links substantive issues with empirical questions. Wolfe and Badgley have recently completed an eight-year study of the work of a group of doctors in Saskatchewan, which will shortly be published as a book entitled THE FAMILY DOCTOR. These authors also published an account of an occurrence that is becoming more prevalent elsewhere, the doctors' strike is Saskatchewan in 1962.[16]

TRENDS IN RESEARCH

The statement of the research problem in many of these studies often reflects the limited focus of the study, namely an investigation of practical issues in health care. For the most part, the studies are atheoretical, that is, there is no attempt to locate a given problem within a larger theoretical framework. The research questions are usually not reduced to explicit testable hypotheses. Some strong exceptions to these generalizations are to be found in the area of social epidemiology of mental illness. The lack of conceptual clarity and of replicable operational definitions makes difficult the comparative analysis of findings. In general, not enough attention has been given to the question of the validity of the social indicators. This deficiency stems in part from the limitation imposed on studies that use data from existing records, rather than generating new data.

Sampling in some of the studies has been conducted on the basis of a limited geographic area, and though it may be carefully done for a specific unit no provision is made for generalizing beyond these limits. Two possible strategies may be recommended to deal with this limitation: either replicate complete studies using new populations, or make provisions in the design for data that will permit the researcher to compare the demographic characteristics of the study population with those of other regions.

Experimental designs have been rarely reported in this field in Canada. Although some of the cited studies report, for instance, the experimental use of a new treatment method, their limited sample size and the crude measures of effect that were used suggest that the reporting of such research should receive a lower priority than the publishing of more thoroughly designed work. The field surveys examined appear to have been well planned and executed. A general comment on design applies particularly to these studies: most studies do not pay adequate attention to the possible time dependence of relations. Those in descriptive epidemiology do include data covering extended time periods. Current work includes a greater number of prospective studies.

CONCLUSIONS

This short review of research in social science and medicine in Canada indicates that although several social scientists are now working in the field, much of the published research of the past decade has been conducted by physicians. No single Canadian journal yet serves as a focal point for these studies. When research results are published, an opportunity is afforded for professional review that may act as a control on quality. Despite this potential benefit, much research that has been initiated during the decade has not been published, which may represent either a waste of resources or a potential boon to scholars already overburdened by attempting to keep abreast with burgeoning library shelves.

The studies surveyed in this brief and all too limited review demonstrate a growing concern for theoretical relevance. The vast majority of studies that have so far been published have been utilitarian in focus. Part of the responsibility for this situation lies in the interests and theoretical orientation of the social scientists themselves, the nature of the settings in which they have worked and the availability of research funding. Important advances in social science and medicine in Canada

may be achieved in the future if greater sociologic sophistication can be brought to bear on these issues, more effective coordination established between interested researchers and if greater efforts are made to initiate collaborative studies across the nation.

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COMMENTARY

Norman W. Bell: Ian Sone is much to be complimented on bringing together as extensive information on research in social science and health as he has. Having tried to establish its extent myself, I know first hand how uncertain and frustrating a task it is. From his paper, it becomes clear that research in this area proceeds on a hit-and-miss basis. Social science and health is not exactly a flourishing occupation in Canada. There are individual contributions of merit, occasionally of international repute, but no strong tradition of a line of work has been established. For a variety of reasons, which I shall discuss presently, Canada does not seem to promote continuing careers in this field. We have had some brilliant initial studies, we have had Royal Commissions, we have had programs at professional meetings, but letting giants grow in stature or midgets grow into giants, that we have not had.

Immediately some caveats must be entered. Sone has gathered a large sample of studies together, but it is an unknown sample from the total pool. Noting the absence of mention of several known studies, listed in research directories, which are readily available (such as that of the Ontario Mental Health Foundation!) one must be concerned whether bias in selection has entered in, and whether the criteria adopted were the best possible and available.

As a professional sociologist I feel I must also express some concern about the uncritical citing of various sociologic con-

cepts. Sociology has suffered from the acceptance of some of its ideas as if they were more real and precise than they in fact are. Let me use social class as an example. This is a legitimate idea, can be indexed in handy ways and is widely used by health researchers with and without social science backgrounds. But I see little evidence that it has been a useful explanatory notion. The reason may be that it stands for too many diverse characteristics—ranging from life style, world view and attitudes, through social location and objective characteristics. Such an idea, I submit, needs much more elaboration and clarification before it can usefully be used by related professions. This is but one example of the omission of what should be, I submit, a high priority—a critical examination of what we as social scientists have to offer in the field of health research.

Caveats aside, the impression stands that research on social aspects of health and health care is, in Canada, in an infant stage. Most people would agree with Sone's impressions of a lack of focus, a lack of coordination, unorganized communication and the like. We can bemoan this situation and take some steps to patch it up. It seems to me, however, that it is a proper function of the social scientists to try to understand the situation and its underlying reasons. As a beginning I should like to comment on a few factors:

1. Obviously, as anyone who tries to hire personnel finds out, there is a dearth of trained people. This lack is not new and has been recognized. Yet despite this, and despite the impetus given by the manifold studies spawned by the Royal Commission on Health Services, only one university in Canada has an explicit training programme in medical sociology. One cannot help but wonder if our universities are responsive enough to social needs and whether we have used public policy in a deliberate enough way. For various reasons training funds in Canada have been confined to general support and been biased toward support of individuals undertaking individualistic programs of study.

2. This in turn raises questions of the evaluation of the social value of research in Canada. One can get the impression from the scale of support that research is not regarded as an inherently useful activity. The size of most (at least many) research grants is so small that research can be no more than a sideline to some other career. It may be objected that we are a relatively poor country just getting into the pattern of an emphasis on research. But since Canada has the second highest standard of living in the world it is hard to rest the argument on economic grounds. Social values, I submit, play a definite role. Social scientists also have a definite role to play in the formation of public policy. The presence of social scientists as professional experts in the corridors of policy is just beginning. May their weight be felt.

3. One must look to the whole social structure of Canada and try to understand why and how we preserve an elitist class system and a style of letting public issues be handled by withdrawing them from open public debate until a royal commission delivers a ponderous report. I am aware that there is some concern about the adequacies of handling issues by commissions and inquiries. I hope that concern grows until there is full participation and good follow-through on things that matter.

4. More specifically (and more delicately) I wonder about the openness of the medical profession in Canada to collaboration with nonmedical (or paramedical as the saying goes) professions. At a personal level I find the health establishment markedly more closed than in the United States. I also note the lack of full-scale studies of hospitals in Canada. Canadians have made significant contributions in this field in other countries. Why can they not do it here?

5. We should take note of the constitutional nature of Canada (or at least the current interpretation of the constitutional nature), which has led to the federal government taking a subsidiary role in various matters. I am not a centralist po-

litically, but many types of coordinated research may require more ingenuity than has been obvious to date.

Finally I am compelled to address a few comments to a type of response that is becoming evident. The lack of communication, continuity and coordination we have been talking about is apparent to others. One response is to centralize controls, to narrow the problems down and create specialized institutes. This pattern has been conspicuously successful in some medical areas (e.g., the Banting Institute, the Montreal Neurological Institute). I would fear that this tendency would do great disservice to the field of social science and health. The elements that go into this field of inquiry are sufficiently different, and the resources it must draw upon so diverse, that at all costs this pattern must not be followed.

In summary let me compliment Ian Sone for having taken a difficult step, and remind us that there are many more steps to be taken.

Carol W. Buck: The research activity of Canadian investigators in the field of behavioral sciences cannot adequately be judged from an analysis of their publications in Canadian journals. Many workers, of whom I am one, tend to publish in British, American or Scandinavian journals. No lack of patriotism is involved in such a choice but rather the wish to aim one's work at a very specific readership. Canada is too small a country to create a series of highly specialized journals that would give us such an array of readerships. I believe that Canada and other countries should turn more and more to the development of international journals in specialized areas. There are already several excellent examples (e.g., *Journal of Chronic Diseases, Social Science and Medicine, Journal of Health and Social Behaviour,* and *Journal of Psychosomatic Research*). National journals would best be left to deal with current science news items and articles of general interest.

I have one comment to make about the support of behavioral science research and indeed of all research. The volume of

literature generated by research activity is now so great that much more time needs to be spent on the thorough review of material already published. To develop the refined hypotheses needed to advance our understanding of many phenomena, investigators must be able to spend considerable periods of time in careful contemplation of the work that has been done by others. There are costs associated with such contemplation that should be recognized as eligible for financial support.

Paul Corey: In the preface to the text on the PRIMARY PREVENTION OF PSYCHIATRIC DISORDERS, F. C. R. Chalke has stated: "Today, specific pathogenic factors in the etiology of mental disorders are no more than *hypotheses.*" Such a statement is readily acceptable to the community of statisticians who, unlike the general public, which believes in the existence of things called facts, view everything as a hypothesis of varying degrees of propriety and acceptability. In fact (no pun intended), it is the tradition of my profession to engage in the perverse preoccupation of tenderly constructing a model we call the null hypothesis in the hope that it may be struck down by an ugly fact. But a fact is nothing other than a highly recognized hypothesis based on a system of measurement in which we place a high degree of faith. The key word here is *measurement.*

To quote Dr. Coates in a personal communication, there are hard measurements and soft measurements, the latter being much in evidence in psychiatric epidemiology. The terms speak for themselves. Hard measurements are durable. We believe in their integrity and their ability to withstand the vituperation of caustic critics. We somehow feel at ease with these ideas. One reason for this is that we assume that the measuring apparatus does not interact with and hence does not influence the object it is measuring. Such an assumption is put to the test even in the well established discipline of electricity where measuring devices do interact with the system that they are measuring. But here as in most areas of the physical sciences the problem is easily circumvented by arbitrarily designing well defined measuring apparatuses with which to define our units.

In biology and medicine the problem of measurement increases in difficulty not because of any changes in the measuring apparatuses, which are identical to those in the physical sciences, but because of the increased heterogeneity of the subject matter; that is, naked apes display more variability than electron cohorts. In fact, my discipline developed rapidly in response to the problem of how to extract useful information hidden underneath the camouflage of excessive variability.

In social medicine the problem is taken one step further. We not only have the same nasty variability in the subject material but now have extensive variation in the measuring apparatus itself, which now turns out to be another naked ape. In the same text referred to previously, Dr. LeRiche states: "If measurement is attempted in the field of mental illness, it should be carried out by the *same* observers. And it should be clear that these same people, psychiatrists or general physicians, do not function equally well as measuring instruments every day of the week." Thus Dr. LeRiche talked of the human observer as the measuring instrument and went on to suggest that observations should be carried out by technicians rather than doctors because technicians are less likely to engage in dangerous interpretations, and will, so to speak, "stick to the facts." This is an attempt to reduce the human variable in the human measuring device. In fact it is really nothing more than suggesting the introduction of a double blind into social medical measuring. The technician not knowing how to interpret the data will only take down facts and because of this ignorance will not elcit subconsciously the "desirable" answers from the observed. The function of the technician could not be obviated by the use of a questionnnaire for although he may not be trained in interpretation and evaluation he is highly specialized in measuring certain *clinical* or *social* symptoms that could not be measured by the person interviewed.

In social medical research these clinical and social variables are usually studied in conjunction with what Ian Sone termed background variables. These variables are quite often of a less

sophisticated nature and more readily obtainable. Such variables as age, income, education, family size and religion are examples. In the Yorklea study some of these variables are combined to form two indices, the socioeconomic status and the familial status in each of 15 geographic units. The socioeconomic index as a measure contains the educational and employment status whereas the familial index contains measures of fertility, single dwelling living and female employment. As research develops it is quite probable that many more factors may enter into the calculation of these indices. What bothers me, however, is the technique called "social area analysis," developed by Eshref Shevky and Wendell Bell.

Briefly this analysis placed the 15 geographic units on a two-dimensional cartesian grid with the socioeconomic and familial indices being measured along the two axes. The area is then broken up into an arbitrary number of equal areas such as quartiles (16 of them, four for each index) so that the 15 geographic units are found to cluster into them. However, this seems to me like the man who could measure to the nearest tenth of an inch and yet reported his findings to the nearest foot. We have available information on individuals that we in effect throw away to see rough sketches whose worth seems dubious. Gerald Fryer engaged in the Yorklea study cited as an example of the worth of this type of analysis the fact that it enabled us to see that Thorncliffe Park had a low proportion of older people. Is such information really useful? Even if some more exotic clinical or social information could be shown to be exaggerated in Thorncliffe Park wouldn't this be of little value? Wouldn't we want to know what *"individual"* background factors were correlated with the sociologic variables?

In fact the same author states that with his arbitrary designation of the 15 geographic units into social areas some are closer in one or both variables to units in another social area than to units in the same social area. All the well known drawbacks of correlation studies are enhanced if we attempt to correlate sociologic variables with social area indices. It may be true that

some mental disease seems prevalent in one or another social area, but possibly not for the reasons that its socioeconomic and familial coordinates suggest.

In conclusion I would like to make a pitch for the general theoretical statisticians. It is certainly true that the research groups have well-qualified and highly specialized statisticians such as epidemiologists and demographers, but yet if the general statistician is to gain experience in what is obviously an exciting and stimulating area of research then he must be brought into the discussions if only to nod his head once in awhile and smile prettily.