
Reinventing the Population Census: Balancing Privacy and Efficiency

In Memory of Roger A. Herriot

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This session is dedicated to the memory of our friend and colleague, Roger A. Herriot. When the American Statistical Association's (ASA) Committee on Privacy and Confidentiality planned this session, we titled it "Reinventing the Population Census," both to reflect the reinventions that are presently in vogue in the Federal government sector and to recognize the special talent Roger had for reinventing ways to generate quality statistics while protecting personal privacy. Our focus is on the expanding use of administrative records in the government's statistical activities, that arise from the intense pressure of fiscal imperatives. This increasing reliance on personal records maintained by the government inevitably raises complex issues of personal privacy and confidentiality.

In examining these issues, it is particularly appropriate to honor Roger Herriot, who was Associate Commissioner for Standards and Methodology at the National Center for Education Statistics (NCES), after serving many years at the Census Bureau. During the past year, he was also a member of the Privacy and Confidentiality Committee.

Roger's insight and imagination often led him to reinvent ways of doing the government's business. His untimely death last spring was a great shock to all of us who knew him and a major loss to the statistical community. In recognition of Roger's integrity, creativity, wry humor, and professional accomplishments, we have put together this program in his memory.

In the biographical remarks that follow, I am especially indebted to Daniel Kasprzyk for his notes on Roger's important contributions to the statistical profession and the commitment he displayed throughout his career to providing quality data to the public.

Roger has a clear vision of the value of administrative records in statistical applications -- in the decennial Census for evaluation programs; in the population estimates program; and in the augmentation of survey data with administrative data, to improve analytic capabilities.

We particularly remember Roger for his work on income statistics -- improving the measurement and analysis of income on before-and-after tax data, poverty, and the separate cash and noncash components of income. Roger played an important role in expanding the collection of income data in the March Current Population Survey (CPS) and in the development of the Survey of Income and Program Participation (SIPP). Before SIPP, he was involved in the first major linkage of survey and administrative data in the remarkable CPS-IRS-SSA Exact Match studies and in SIPP's predecessor, the Income Survey Development Program.

My special memory of Roger goes back two years to the session I co-chaired with him at the ASA's meetings in Boston. Roger had suggested to the Privacy and Confidentiality Committee that it would be fun to take a single microdatum -- such as a Census variable or a social security number -- and follow that item of information through its life cycle to uses that are often far removed from those that are expected by either the individual whose information is collected or the person who does the collecting. In the session that developed, our panelists examined and followed selected microdata through various data transformations -- small area data for commercial targeting or for revenue sharing; the transnational movement of household and retail data; the development of health statistics from physicians' patient records; and the threat of antitrust enforcement use of confidential survey responses. As Roger predicated, it was fun. And in his laid-back way,

Roger brought our privacy concerns into focus in the general discussion.

Roger was always concerned about privacy and confidentiality issues. He recognized that individuals have a claim to the protection of their personal data; and he was equally aware of the corollary -- that statisticians risk losing access to data if individuals lose faith in the ability of users to protect their privacy.

His recent work at NCES resulted in improved public access to education data and the development of a database on the nation's school districts for policymakers and researchers, balanced with new protections for privacy and confidentiality. In this connection, he built on his long experience with methods of avoiding statistical disclosure. Recently, he was doing pioneering work at NCES on developing formal instruments to hold users responsible for the proper care of private and confidential data in statistical applications. His work serves as an introduction to today's program.

The principal paper in this session examines the benefits in cost and efficiency in Census' use of government administrative records to improve coverage of certain undercounted subpopulations and to reduce respondent burden and escalating costs associated with enumeration in the population Census. The authors describe recent experience in the U. S. Bureau of the Census (Knott, 1995) and in Statistics Canada (Leyes and Eisl-Culkin, 1995) for use of administrative records to augment or substitute for data collected directly, and they project potential benefits of this expanded use.

The discussants examine privacy and confidentiality issues related to statistical use of personal data, as they appear from several divergent perspectives. The first point of reference is the policy perspective of the Social Security Administration (SSA). This agency is a major producer of administrative records and a major user of those records for analytical purposes; and also a major provider of administrative records to the Census Bureau for its statistical uses. At the same time, SSA is an agency with a historical

commitment to protecting individual privacy in the records it maintains in administering its programs [1].

The second viewpoint is that of the individuals whose data are maintained in administrative files. The interests of individuals are represented by a privacy advocate from the office of Canada's Privacy Commissioner (Oscapella, 1995).

The final perspective is that of the Office of Technology Assessment, the office that has responsibility for advising Congress on the balance of efficiency and personal privacy in the management and use of personal information by the Federal government [1].

Among the privacy and confidentiality issues associated with the statistical use of administrative records are questions of informed consent for new uses of compulsory data collections; the use of SSN's or similar personal numbers as national identifiers; the magnification of information about an individual, resulting from the linkage of data variables from several separate record sources; questions of sampling vis-a-vis full population counts; and the type and amount of data compiled about a particular individual. We offer this program to promote a dialogue toward better understanding between the statistical community and privacy advocates, by exploring some unresolved issues on which these groups have often been divided.

■ Footnotes

- [1] Regrettably, the discussions by Peter Wheeler, Social Security Administration, and Paula Bruening, Office of Technology Assessment, U.S. Congress, were not available for this volume.

■ References

- Knott, Joseph (1995), "Administrative Records Use in the 1995 Census Test," *Statistics of Income: Turning Administrative Systems Into Informa-*

tion Systems--1994, Internal Revenue Service (this volume).

Leyes, John and Eisl-Culkin, Judy (1995), "Administrative Social Data in Canada: Some Results and Some Implications," *Statistics of Income: Turning Administrative Systems Into Information Systems--1994*, Internal Revenue Service (this volume).

Oscapella, Eugene (1995), "Discussion," *Statistics of Income: Turning Administrative Systems Into Information Systems--1994*, Internal Revenue Service (this volume). ■

Obituary

ASA Fellow Roger A. Herriot, 52, Associate Commissioner of the National Center for Education Statistics (NCES) at the U. S. Department of Education, died April 20 at Georgetown Hospital in Washington, D. C., of a pulmonary embolism resulting from an accidental fall at a vacation home in Edgewater, Maryland, on April 17.

Mr. Herriot, who lived in McLean, Virginia, was a specialist in economic statistics and was formerly Chief of the Population Division of the Census Bureau. He had been Associate Commissioner for Statistical Standards and Methodology at the Education

Department for three years. His work there included development of a database on the nation's 15,000 school districts, for use by educational researchers and policymakers.

At Census, which he joined in 1969 after moving to the Washington area, Mr. Herriot devised methods to update data for Federal revenue-sharing programs. He also worked on models for estimating after-tax incomes that are used for determining revisions in tax laws.

As Population Division Chief, Mr. Herriot often was asked to testify about the growing role of noncash benefits in Federal assistance programs.

In 1988, he received the Julius Shiskin Award for Economic Statistics of the Washington Statistical Society, for his work in finding ways to measure and analyze the economic well-being of Americans. He was the author of numerous articles about statistical policies.

Mr. Herriot was born in Huron, South Dakota, and raised in Colorado. After serving in the Army, he received a bachelor's degree from Colorado State University and a master's degree in economics from the University of Connecticut. An active member of ASA, he served most recently on the Committee on Privacy and Confidentiality. (*Excerpted from the Washington Post, April 22, 1994.*)