

100, and the coding schemes and record layouts were reorganized so as to be compatible with the 1970 samples. For the 1970 census itself, the Census Bureau released six independent public use samples, each with one percent, hence allowing users who needed large number of cases to combine the samples and obtain a density of up to six percent, or about 12 million individual records. The Census Bureau also released public use samples for the 1980, 1990 and 2000 censuses with increased geographic detail and subject content compared to the 1960 and 1970 PUMS (for more information on the Census Bureau's public use samples see Ruggles et al 2000).

Meanwhile, in the late 1970s a group of researchers at the University of Wisconsin led by Halliman Winsborough developed the idea of creating historical public use samples for earlier census years. With funding from the National Science Foundation they contracted with the Census Bureau to create one percent samples from the censuses of 1940 and 1950. Other US research groups, most notably those at the University of Pennsylvania headed by Samuel Preston and at the University of Minnesota headed by Steven Ruggles created historical samples from the 1850, 1860, 1870, 1880, 1900, 1910 and 1920 censuses<sup>1</sup> (for more details on the creation of these historical samples see Ruggles et al 2000). The Integrated Public Use Microdata Series (IPUMS) is a database, which includes samples of all available US censuses, and is currently the world's largest public-access individual level database on a human population. The work on it began in 1992 as an outgrowth of the Historical Census Project headed by Steven Ruggles at the Minnesota Population Center (MPC), University of Minnesota. Sampling designs, classifications, nomenclatures and coding schemes are integrated/harmonized across the different census rounds, thus facilitating the use of the database. The data are available to all interested users through a web-based access system (for more information on IPUMS see Ruggles et al 2000). In 1999 an international extension of this project began (known as IPUMS International), which currently covers six countries (China, Columbia, France, Kenya, Mexico, and Vietnam).

In the 1990s the practice of releasing census-based microdata samples for research purposes gained important momentum. For example, the United Kingdom's Office of National Statistics released public use samples for the 1991 census (known as Samples of Anonymized Records, or SARs), and is continuing this practice with the 2001 census. As a result of the so-called Data Liberation Initiative, in 1996 Statistics Canada opened the access to the samples it had been creating since 1970 census for a broad range of academic institutions and researchers (for

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<sup>1</sup> The only census for which a sample is not available is 1890, as the enumeration forms from it were accidentally destroyed by fire more than a century ago (see Ruggles and Menard 1995). The 1930 sample is currently under construction, as under the provisions of the US Confidentiality Law work on it could not start until 2002.