

Population Statistics, the Holocaust, and the Nuremberg Trials

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THIS ARTICLE PRESENTS the findings of my recent research on the role of population statistics and related data systems, methods, and personnel in planning and carrying out the Holocaust. Specific attention is given to events in Germany, Poland, France, the Netherlands, and Norway. In addition, the article examines how population data were used in the Nuremberg War Crimes Trials following the conclusion of World War II.¹ This research was based on an extensive review of contemporaneous and secondary sources that deal with the Holocaust and the Nuremberg trials, the relevant national data systems, and the activities of a number of the statisticians and demographers involved. No attempt was made, however, to develop new estimates of Holocaust mortality, nor was any evidence found to call into question the mortality approximations made over 50 years ago.

In many respects, examining the use of statistics and statistical systems in the service of genocide is a more productive undertaking than trying to fine-tune the estimates of Holocaust victims or, indeed, the mortality caused by any genocide. Such figures are often clouded in both secrecy and uncertainty, so that beyond a certain point, efforts at refining estimates of genocide mortality have little purpose or prospect of success. This is a conclusion on which many Holocaust scholars, prosecutors, and statisticians seem to agree (Fein 1981; Hilberg 1985: 1202; Spierer and Spierer 1993: 3). On the other hand, the largely unrecognized role that statistics and statistical systems played in the Holocaust has implications for the investigation and criminal prosecution of genocide more generally as well as for fostering standards of ethical behavior among those working as statisticians and demographers. I also hope that knowledge of this historical experience may contribute to the development of more prudent national statistical policies now and in the future.

This article thus addresses an understudied borderland between demography, statistical policy, human rights defense, and Holocaust scholar-

ship. As such, some of its findings and conclusions may challenge long-held and largely implicit assumptions in diverse fields. To facilitate understanding by a multidisciplinary audience, rough working definitions are provided of both the Holocaust and a national statistical system. As used here, I define the Holocaust as the deliberate annihilation of approximately 6 million European Jews by the Nazis before and during World War II. In a broader sense, the Holocaust can be defined as the entire Nazi effort to exterminate European Jewry, involving an extended “destruction process” that consisted of several steps: “definition, expropriation, concentration, and annihilation” (Hilberg 1985: 53–54). In either case, it was a program of genocide. (This article does not address the closely related efforts of the Nazis to eliminate other “undesirable” population groups such as Gypsies, homosexuals, and various categories of the disabled.)

Although “scholars differ as to whether Hitler’s decision to exterminate the Jews was latent from the beginning of his career or developed incrementally in response to the failure of previous plans to eliminate them [through] emigration . . . ” (Fein 1984: 23), most seem to agree that the administrative arrangements needed to accomplish the systematic, massive killings that characterized the end of the process evolved over time (Browning 1992: 86–121). The entire effort was cloaked, moreover, in a range of deceptive practices, one of which was the use of ambiguous language. A prime example of this was the phrase, *die Endlösung der Judenfrage*, the final solution of the Jewish question, frequently used by Nazi authorities to describe the policy of killing Jews rather than arranging for their emigration from Europe (Hilberg 1985: 273).

A country’s national statistical system consists of those units of central and local government that collect, compile, and disseminate statistics as a principal activity or as a byproduct of one or more administrative activities for which they are responsible. For example, in the population field the population census is primarily a statistical activity, usually carried out by the central statistical agency of a country, while birth and death registration systems are administrative activities serving a variety of administrative purposes in addition to generating vital statistics. More broadly, the term “national statistical system” is often used to refer to the statistical activities of all those units producing statistics, the methods, definitions, and classifications they use, and the personnel engaged in this work.

Traditionally the outputs of essentially statistical operations, such as the population census, are made available to the public or those in government concerned with administration, regulation, or law enforcement only in the form of aggregated data (that is, statistics); all unprotected microdata or other information that permits the identification of individual persons is considered to be confidential. This tradition of wide dissemination of aggregated data and the protection of individual responses is reflected in the laws and practices of most countries and in a number of national and in-

ternational normative standards. (See, for example, the “Fundamental Principles of Official Statistics” adopted by the United Nations Statistical Commission (United Nations Economic and Social Council 1994) and the “Declaration of Professional Ethics” adopted by the International Statistical Institute (1986).)

Responding to analytic needs of the research community, a number of national census offices now also make available special census files that permit users to carry out their own tabulations and analyses. These files, which are sometimes referred to as microdata, have been treated to protect the identity of individual respondents. (To avoid confusion, the term “unprotected microdata” is used in this article to refer to census and similar data files that have *not* been so treated and that may be used to identify and locate specific individuals.)

Most of the countries of Europe in which the Holocaust took place had well-developed national statistical systems, and many also had a substantial number of experienced statisticians. Administrators and policymakers, in addition, frequently made use of data in management and policy development. The basic sources of population and related statistics in Europe at that time were population censuses, birth and death registration systems, administrative reporting systems under the jurisdiction of the education, labor, health, and similar ministries, and, in a few of the countries, population registers. The last of these is an administrative reporting system that maintains a continuous record for each person in the population, recording all changes of address, along with other information about each individual. Such a register, if accurately maintained, can be a powerful administrative tool and a valuable source of population statistics. On the other hand, population registers, as shown below, can also be readily adapted for use as an operational tool of genocide.

Planning for the “Final Solution”

The systematic killing of several million Jews living throughout Eastern and Western Europe was a massive undertaking. In addition to the horror of death and brutality, there was extensive planning, organization, and coordination. As Hilberg states in his study of the Holocaust, “the destruction of the Jews was an administrative process, and the annihilation of Jewry required the implementation of systematic administrative measures in successive steps” (1985: 9). The same ideas are implicit in Arendt’s “banality of evil” (1976) and Horowitz’s view that genocide involved “destruction . . . by a state bureaucratic apparatus” (1997: 21).

At every stage of this administrative process, statistics and statistical systems were used to advance the Holocaust. For example, the minutes of the inter-ministerial Wannsee Conference (Arad, Gutman, and Margalio 1981: 249–261), held in Berlin on 20 January 1942 to assist in “planning

the organizational, practical and economic aspects of the Final Solution of the European Jewish question," contained estimates of Jewish emigration from Germany and Austria from 30 January 1933 to 31 October 1941 and of the total Jewish population remaining in Europe ("over 11 million"). The Wannsee Protocol, as these minutes are frequently termed, supplemented this overall estimate with a table showing the estimates of the Jewish population for each of 35 countries or areas of Europe. Following the presentation of data are a paragraph commenting on the ways in which the estimates in the table are affected by differences among countries in how the concept "Jew" was defined and another paragraph presenting data on the occupational distribution of the Jewish population in the European part of the Soviet Union. Arendt (1976: 113–114) attributed the statistical materials provided to Conference participants solely to Adolf Eichmann, apparently based on his statement, "I had to supply Heydrich with the data for his speech, all the emigration figures" (Lang 1983: 88). It seems likely that more-expert statistical advice aided in the preparation of these materials. As shown later, such expertise was readily available to Eichmann and to Heinrich Himmler. Perhaps because Eichmann often used numbers in an apparently imprecise and casual manner, Arendt simply characterized these materials as "full of incredible errors."

Those listed as present at the Wannsee Conference included six officials from the *Schutzstaffel* (SS) and the police and nine representatives from other ministries and organizations. In all, 30 copies of the protocol were issued. Many of those present and many of the others who were known to have received copies of the protocol were subsequently among those indicted as war criminals (Arad, Gutman, and Margaliot 1981: 252–255; Reitlinger 1968: 98–104 and Annex II; Robinson and Sachs 1976: NG-2586-G; Hilberg 1985: 404–406).²

Implementing genocide

In addition to providing the summary data used at the Wannsee Conference, statistical systems and methods contributed to the implementation of the Final Solution in three ways: (1) special censuses or population registers of Jews in particular jurisdictions or localities were used to obtain information about their number and demographic and labor force characteristics; (2) the completed forms from these censuses or registration systems were used to provide the names and addresses of Jews to be included in transports to concentration and extermination camps; and (3) expert statistical services and personnel were used to guide this work as well as to compile and disseminate statistics and estimates of the remaining Jewish population at various stages and of the number of persons transported.

While regular population censuses conducted prior to World War II in a number of European countries generated some data on the Jewish

population,³ there appears to be only one instance, namely the 1939 German census, where information permitting the identification of specific individuals may have been used operationally in the Holocaust. (The descriptive and analytical use of aggregated census data to justify racist conclusions, including anti-Semitic policies, is not covered in this article.) However, census-based aggregates for small geographical areas can also be used operationally to assist in the identification of population concentrations to facilitate persecution and apprehension. This approach appears to have been used in the Netherlands, where small-area tabulations of population data by religion from the 1930 Dutch census were one of several data sources used in the development of the so-called dot-maps of Amsterdam that indicated where the density of the Jewish population was the highest (Nobel 1998). (Another example of this approach was the successful use of special tabulations of persons of Japanese ancestry enumerated in the 1940 US population census to assist in internment of Japanese-Americans at the outbreak of World War II (Choldin 1994: 239–240).) While such uses of population census outputs may not be a technical violation of traditional census confidentiality provisions, they represent a highly questionable use of census data (Begeer and de Vries 1987).

On the other hand, special censuses and registrations of Jews were widely used in Holocaust-related operations in areas under Nazi control or influence. With minor variations, a common pattern was observed in the five countries I examined in this research: Germany, Poland, France (both the occupied and Vichy zones), the Netherlands, and Norway. In all these countries there was an initial classification and count early in the process, a continuing interest in data to describe the size, structure, and conditions of the Jewish population, and the use of unprotected microdata (that is, microdata that permit the identification of individual persons) to aid in rounding people up for internment and deportation. Given the important role that both data and lists played in the countries examined, it seems likely that a review of the experience in other countries would reveal a similar pattern. For example, a similar approach seems to have been envisioned, but not necessarily implemented, to assist the *Einsatzgruppen*—special military units—which carried out mass killings in Soviet-occupied Poland, the Baltic countries, and the Soviet Union after the June 1941 German invasion of the USSR (Hilberg 1985: 273–334). Even in the case of the *Einsatzgruppen*, progress was routinely reported and summarized in statistical terms (Headland 1992).

Germany

The population census carried out in June 1933, about five months after Hitler assumed power, obtained information on the religion of each member of the population.⁴ Inclusion of an item on religion had a long tradition

in German censuses (as well as those in some other European countries). Prior to the 1925 census the question was asked in terms of religious belief (*Glauben*). In the 1925 and 1933 censuses the question was asked in terms of formal membership in a church or similar religious body, although the same word, *Glauben*, was used to describe the concept (Rosenthal 1944: 234). Results from the 1933 census item on religion were first published by the German Statistical Office in its official journal, *Wirtschaft und Statistik*, in October 1934 (Vol. 14, no. 19: 657–659). In the same journal several months later appeared a report, “Jews in Germany 1816 to 1933” (Vol. 15, no. 4: 147–151), also labeled as a 1933 census output. According to Rosenthal (1944: 241–243) the German Statistical Office included in the latter report a special cross-classification of the Jewish population by both nativity and citizenship to create “a further basis upon which Jews could be classed as aliens.”

Six years later the May 1939 population census not only asked about membership in a religious organization, but also attempted to identify “racial” Jews according to the categories of the anti-Jewish Nuremberg Laws (Plate 1939: 423–424; Blau 1950: 161–162).⁵ Under this latter concept, the religion of all four grandparents had to be taken into account in addition to a person’s own religion. On the basis of these questions, the German Statistical Office was able to produce a report, “Jews and Jews of Mixed Ancestry” [*Mischlinge*] in *Wirtschaft und Statistik* in 1940 (Vol. 20: 84ff) and a final publication in 1944 (Blau 1950: 161). The former source presented cross-tabulations of *Glaubensjuden* (that is, those who reported Jewish as their current religious affiliation) with various categories of “racial” Jews, as well as similar cross-tabulations for married men and married women where at least one of them was Jewish according to either definition (Blau 1950). It also presented some comparative data for 1933 and 1939 (Hilberg 1985: 157–158).

Writing shortly before the 1939 census, Plate (1939: 424) indicated that information pertaining to “racial Jews” in the census was to be recorded on a supplementary card for each person present on enumeration night and for all household members who were temporarily absent. After the card was completed it was to be placed in a special envelope to be opened only in the German Statistical Office. Plate (*ibid.*: 428–429) also emphasized the role of the 1939 census in the search for “a solution to the Jewish question,” noted that the census would for the first time permit a “statistical investigation of persons of Jewish ancestry,” and described some of the tabulations that were planned.

The instructions for the census item on Jewish ancestry were complex since they entailed questions about the religion of all four grandparents of each person. These instructions were reportedly written by Friedrich Burgdörfer, a professor of statistics and population policy at the University of Munich and a director in the German Statistical Office (Weinreich 1946:

264). Burgdörfer had been the senior professional responsible in the Statistical Office for the 1925 and 1933 censuses. He was also an author of a number of papers on racial issues presented at scientific conferences and published in professional journals in the 1930s (see early issues of *Population Index* and its predecessor, *Population Literature*, beginning with Vol. 1, no. 1, 20 January 1935).⁶ The person with day-to-day responsibility for this aspect of the 1939 census was Dr. Roderich Plate, author of the main professional paper describing the census (Plate 1939). Plate was Eichmann's "call-back" expert at the German Statistical Office and, between mid-1941 and early 1942, one of the statisticians on Himmler's staff. In this last capacity, he appears to have provided Eichmann with the population statistics used at the Wannsee Conference (Aly and Roth 1984: 61).

Friedländer (1997: 199), citing Aly and Roth (1984) and Drobisch (1993), outlined a different use of the supplementary cards from the 1939 census. According to him, at a conference of middle-level officials of the SD (*Sicherheitsdiens*, the Security Service of the SS) in November 1937, plans were discussed for using the census cards to carry out a "complete registration of all Jews in Germany (including half- and quarter-Jews)." Friedländer added, "The Jews were registered, as planned, and the card files fulfilled their function when the deportations began." As discussed below, at the time the mass deportations began, the Gestapo (*Geheime Staats Polizei*, the State Secret Police) and the other agencies involved had access to more-recent data sources so that while unprotected microdata from the 1939 census may have contributed to the compilation of the deportation lists, it was probably not the exclusive, or even the primary source. Moreover, in a secret report to Himmler, discussed more fully below, Dr. Richard Korherr also questioned the usefulness of data, particularly pertaining to "half- and quarter-Jews," generated by the item on racial Jews in the 1939 census. Korherr noted that since the responses to this item "were to be handed in in a sealed envelope and could not be examined on the spot, they were filled out poorly" (Wellers 1978: 178). Korherr had first-hand access to authoritative information about the 1939 census since Plate had served as his deputy for some months (Hilberg 1985: 1205; Aly and Roth 1984: 61).

In July 1939 the *Reichsvereinigung*, the community organization to which all Jews in Germany were required to belong, together with its local offices in each city, was taken over by the Security Police (*Sicherheitspolizei*, consisting of the Gestapo and the non-uniformed criminal police) (Hilberg 1985: 184). Dr. Cora Berliner, Plate's and Burgdörfer's former colleague from the German Statistical Office, had overall responsibility for the *Reichsvereinigung's* statistical work (Hilberg 1985: 186; Baker 1978: 171), although the scope of her activities was far broader (see, for example, Schmitt 1997: 109). Born in 1890 in Hanover and a graduate of Heidelberg University in 1916, by 1930 she had attained senior professional status (*Regierungsrat und Mitglied*) in the Statistical Office and like Burgdörfer and

Plate was published in the leading statistical journal (e.g., Berliner 1930). Subsequently, she became a senior official in the Economics Ministry until 1933 (Sauer 1987: 369). These were unusual accomplishments for a woman and a Jew, even in the Weimar republic (Kaplan 1979; Barkai 1989: 27). In addition to her work in economic statistics and policy, Berliner at one point was vice president of the *Jüdischer Frauenbund* (Koonz 1986: 287). (Established in 1904, it was the largest Jewish women's organization in Germany.) Like several others in the *Reichsvereinigung's* leadership, she chose not to accept opportunities to emigrate (Baker 1978: 248–249).⁷ She was deported to her death from Berlin in June 1942. When last seen by a friend shortly before her departure, she “was sitting in the sun in her garden reading Goethe” (Kaplan 1979: 205).

Among the first new responsibilities assigned by the Security Police to the *Reichsvereinigung* were “reporting deaths, births, and other demographic data to the Reich Security Main Office [RSHA] . . . [while] . . . toward the end, they prepared charts, maps, and lists . . . in preparation for deportation” (Hilberg 1985: 187). Three distinct sources for the deportation lists have been mentioned: (1) a regular monthly canvass of the Jewish population that the Gestapo ordered Jewish community organizations to carry out beginning in May 1941 and continuing until at least September 1944 (Blau 1950: 171); (2) the Gestapo card file of Jews based on unprotected microdata from the 1939 census (Friedländer 1997: 199); and (3) a mixture of police records, Jewish community organization tax and housing records, and card files of ghetto residents maintained by the community organizations, supplemented by information obtained from special questionnaires administered to ghetto residents (Hilberg 1985: 455, 460–462). According to Friedländer (1997: 199), work on starting the Gestapo card file predated the 1939 census by more than two years, and the principal justification for the card file as expressed in a 1937 internal Gestapo meeting was that it would “establish the number of Jews and of people of Jewish origin according to the Nuremberg Laws living today in the Reich.”

Since detailed arrangements for deportation—which started on a massive scale beginning in 1941—varied from city to city and by time period (Hilberg 1985: 455–456), it is possible that information from all three sources was used, although by 1941 the 1939 census information had become outdated for operational purposes. Moreover, the concept of *Mischlinge* had to be simplified for operational reasons in the census enumeration from the concept specified under the anti-Jewish regulations (*ibid.*: 418). Certainly Hilberg's description of what happened in Frankfurt is consistent with the multiple-source hypothesis:

During the spring of 1941 the statistical division [of the Frankfurt office of the *Reichsvereinigung*] was instructed to make up a roster of all members of

the community in triplicate. One day in the fall, . . . a list of 1,200 people [came back] from the Gestapo, which had to be supplemented with additional information. Rumors that the list was to serve the purpose of deportation were denied by the Gestapo. Two days later, on October 19, 1941, the roundup began. (ibid.: 456)

Poland

Nazi-occupied Poland is another well-documented example of the intricate involvement of statistics and statistical systems with the administrative processes that ended in genocide. Immediately following the occupation of Poland, Reinhard Heydrich, Head of the Reich Central Security Office (*Reichssicherheitshauptamt*, abbreviated RSHA, which at this time was responsible for the Security Police and the uniformed police) under Himmler, issued a set of instructions, dated 21 September 1939, on policies and operations concerning Jews in the occupied territories. These instructions called for the establishment of *Judenräte*, or Councils of Jewish Elders, one of whose responsibilities was “to carry out an approximate census of their areas” showing persons classified by sex and age group (Arad, Gutman, and Margaliot 1981: 174; Robinson and Sachs 1976: PS-3363).

Within days of Heydrich’s instruction, the newly designated Chairman of the Warsaw *Judenrat*, Adam Czerniakow, recorded in his diary beginning on 4 October 1939 a flurry of activities related to preparations for the census (Czerniakow 1979: 78–89). These included extensive consultations with the German authorities (see entries for 7, 12, 20, 21, and 23 October 1939), and at least some consultations with the Polish National Statistical Office (see entries for 17, 19, and 21 October 1939). Apparently, the census was successfully carried out and tabulated and the results made available to the Germans (see entries for 28 and 31 October and 1 November 1939), although at least one respondent, Chaim Kaplan, observed in his diary, “our hearts tell us of evil—some catastrophe for the Jews of Warsaw lies in this census. Otherwise there would be no need for it” (Kaplan 1965: 57). Kaplan seems not to have been alone in his concern, for Czerniakow himself, even while noting the success of the census, wrote of having received “from all sides questions about the purpose of the census” (entry for 28 October 1939).

Following this initial demand for data, various Nazi authorities continually requested additional statistical information from the Warsaw *Judenrat* throughout its existence (see, for example, Czerniakow’s (1979) diary entries for 18 and 22 November 1939; 7 July 1940; 3 May, 11 and 14 July, 13 September, and 14 October 1941; and 29 April 1942). While the topics covered were varied, including health, housing, and nutrition, the major focus was, as in the first census and the minutes of the Wannsee Confer-

ence, data on the total population and on occupational distribution. Shortly after the Wannsee Conference, moreover, and by hindsight in clear preparation for the series of mass deportations to Auschwitz and other camps, Fein (1984: 241) quotes the 1973 edition of Kaplan (1965) to the effect that the Warsaw *Judenrat* instructed everyone to complete, by 31 January 1942, a questionnaire seeking information on name, parents' name, family status, prewar and present address, and occupation as of 1 September 1939 as well as current occupation. Terming this new special census a "roll call," Kaplan observed that "exiles from other cities tell us that in their cities, too, the evacuations began with such a roll call."

While the arrangements varied from city to city, other *Judenräte* were also required to carry out initial censuses in line with Heydrich's instructions (Trunk 1972: 48), to maintain population and vital event registration systems, the latter in association with the local municipal registration authorities (1972: 172), and to provide numerous regular and ad hoc statistical reports to the Nazi authorities (ibid.: 277–280). To fulfill these responsibilities, most of the *Judenräte* established statistical and/or registration departments (ibid.: 172–175) and, "in the case of the large ghettos, such as Warsaw, Łódź, Lwów, and others, needed [to employ] trained statisticians" (ibid.: 279). Many of these statistical and registration departments (for example, Warsaw, Łódź, Crakow, Vilna, Kaunas, and Czestochowa) also carried out research on their own and released statistical and analytical reports, bulletins, and yearbooks (ibid.: 174–175).

Finally, as in the case of Warsaw, just prior to the massive deportations to the death camps, these registration or statistical departments were ordered to use the data systems they maintained to generate "lists of ghetto inmates arranged by age, sex, and occupations, etc." for use by the authorities (ibid.: 173). This task was not a voluntary one nor was its purpose necessarily anticipated. For example, Trunk reports that in Grodno, a city in the Bialystok region,

Arye Marder, who had been in charge of the ghetto's statistical department, submitted his resignation . . . when it became apparent that the Germans intended to use his statistical materials to liquidate the Jews. The Council put his name on the next transport. When he learned about this he committed suicide. . . . His family was deported on the next transport. (ibid.: 444)

France

Special censuses or registrations of the Jewish population were carried out in both occupied and Vichy France. In the Occupied Zone of France, a German ordinance of September 1940 required a census of Jews to be carried out by the French police. In Vichy France the Pétain government issued a

similar law in June 1941 requiring all Jews to make, within 30 days, elaborate declarations in person. Police, prefectural, and administrative authorities were all involved in the census (Marrus and Paxton 1983: 100). For example, in Marseille “personnel at the prefecture gathered the census data through normal administrative channels” on the basis of declarations made at the town hall (Ryan 1996: 35). Persons not complying with the census essentially had to go underground (*ibid.*: 36).

As Adler (1987: 3) points out, “the German census of October 1940 and the census held in the Vichy Zone in June 1941 . . . occupied a central position in the application of anti-Jewish policies: the Jews had to be defined and recorded as a group.” Subsequently, in both the Occupied Zone and Vichy France, names and addresses obtained through these same censuses were used to generate the lists of Jews that the Gestapo and the French police employed to identify and locate Jews for deportation to various concentration and death camps (Marrus and Paxton 1983: 243; Ryan 1996: 41–42 and footnote 53).

The precise role of the French statistical services in these activities has been a matter of some concern in France, particularly in recent years. In order to obtain an authoritative assessment of the behavior of the official statistical services under the Vichy regime and the German occupation, Jean-Claude Milleron, the Director-General of INSEE (the French national statistical office) from 1988 to 1992, commissioned a study of the issue. He asked Jean-Pierre Azéma, a leading French historian of the period, and Raymond Lévy-Bruhl, a former senior staff member of INSEE with extensive knowledge of the organization, including its administration, personnel, and formal and informal archives, to undertake the study. Although the Holocaust was not specifically mentioned in the terms of reference of the Azéma/Lévy-Bruhl study, it is clear that when a report of the study is issued one of the questions it will help to answer is the contribution, if any, that the statistical services may have made to the Holocaust in France.

Shortly after the INSEE study was commissioned, and as a result of public charges made in France about the sources of information used to identify and detain Jews prior to their deportation to the East, a French governmental committee chaired by the historian René Rémond was established to investigate the way in which registers of Jews were created in France in the period 1940–44. The report of that study (Rémond et al. 1996) reveals a complex and ambiguous picture. On the one hand, no direct evidence was found linking unprotected microdata produced by the statistical services in either part of France with the lists used in the deportations (*ibid.*: 12 and 143–144).

On the other hand, both Henri Bunle, head of the *Statistique générale de la France* (SGF), and René Carmille, head of the *Service national des statistiques* (SNS), which absorbed the SGF in October 1941, are on record

as having volunteered their agency's services to Xavier Vallat, *Commissaire général aux questions Juives* in the Pétain government. From the start Vallat gave priority to carrying out a census of Jews in France (ibid.: 68), and Bunle wrote to Vallat shortly after the latter's appointment, "France is nearly the only country in Europe where the number of Jews within its population is not known, nor *a fortiori* their distribution by age, citizenship, occupation, etc.," concluding "the SGF is at your disposal . . ." (ibid.: 69). Although Bunle added a cautionary note that ". . . the results of the survey would be kept rigorously secret by my office and transmitted exclusively to your department" (ibid.), it is not clear whether he was trying to protect the respondents or the SGF. Carmille, in his letter to Vallat, seemed to abandon any distinction between statistics and administration, which in this case was persecution, writing in part:

I am at your disposal for studying, jointly with your department, a form which would allow your *Commisariat général* as well as the *Service de la démographie* to gather all useful information on the Jews, to identify those who did not make their declarations, to organize the control and the eventual transfer of their possessions in line with the law, and finally to have a precise picture of the Jewish problem. . . . (ibid.: 70)

Ironically, it was Vallat who demonstrated sounder views on statistical policy, however reprehensible his other views may have been. He turned down Carmille's offer within three days because "he did not wish any interference between the two types of censuses 'given the special nature of the information I need'; he preferred the type of registration form 'that had been well-tested in the occupied zone'" (ibid.). Ultimately, the statistical service was asked to process the forms and the cards from the June 1941 census, and it did so, although at some point Carmille may have given a verbal order to slow down operations (ibid.: 142–144) and after 1942 made a point of keeping a strict separation between the statistical and police functions (Lévy-Bruhl 1998).

Carmille, a Polytechnique graduate, had for some years been driven by a vision of the transformation of the entire French administrative services by the new data processing technologies then becoming widely available (Rémond et al. 1996: 140). It appears that he saw in the circumstances of France and its Jewish population a way of demonstrating a practical application of his vision of the new demographic statistics. In Carmille's words,

The agencies which have been working in demography have compiled a wide range of statistics, always in terms of statistical aggregates. . . . The new agency will have a quite different starting point, its objective will be the creation of individual records. . . . From now on it is no longer a matter of counting, but of following individuals. . . . The new organization must now be designed so

that information can be gathered continuously, requiring that updating be done with meticulous precision. (Rémond et al. 1996: 140–141, quoting from Carmille 1941)

Not surprisingly, Carmille's vision was opposed by "some researchers from the SGF who thought that it was dangerous to move from statistical counting to individual recording, . . . [but received] strong support from those in Vichy who favored the transformation of statistics into a by-product of individual control" (ibid.: 141).

Within France, and this is also reflected in Rémond's report, the overall assessment of Carmille is tempered by the view that he is considered to have been, in some respects, a patriot. For example, an objective of one of his massive registration efforts was to prepare for a clandestine remobilization by identifying potential recruits for a new French army. In any case, he was arrested in February 1944 and deported to Dachau, where he died in January 1945 (ibid.: 145).

The final report of the Azéma/Lévy-Bruhl study is now being completed and is expected to be given to the Director-General of INSEE later in 1998. Lévy-Bruhl recently provided the following summary of the main conclusions that he and Jean-Pierre Azéma reached (Chapron 1997; Lévy-Bruhl 1998):

(a) the massive arrests and deportations of Jews in France were organized on the basis of registers compiled by the French police and the German Gestapo. No registers from the French governmental statistical services were used;

(b) no evidence has ever been found to support the allegation that individual denunciations of persons who changed identity and residence were associated with the register of individuals compiled by the governmental statistical services in 1941;

(c) nevertheless, the existence of this register, which included the individual names and recent addresses of the whole population, given the situation in France at that time was unquestionably a source of potential danger, both to individuals and communities;

(d) moreover, the behavior of the leadership of the French government statistical services in the early years of the occupation exposed individuals and communities to potential threats emanating from these services.

Netherlands

In the Netherlands, the registration of Jews was ordered by a decree of the occupying German authorities dated 10 January 1941 (Presser 1969: 35–39; Robinson and Sachs 1976: PS-3323). The actual registration process, however, was carried out by the Dutch administrative services, adapting the then recently enhanced population registration system to this new task.

The local burgomaster or population registration office received the registration report, and the registration office also received half of the fees that Jews were charged for registration. The registration process was carried out under the direction of J. L. Lentz, head of the population registration office. Lentz was actually responsible for developing and administering several interrelated, but distinct systems. These included the newly improved population registration system (1936), an obligatory identity card covering the entire population (October 1940), the registration of Jews (January 1941), and a new control card for the rationing system (December 1943) (Nobel 1998).

The German authorities considered the adaptation of the population registration system and identity card that was used to register the Jews to be an outstanding technical success. In the words of Dr. Friedrich Wimmer, the German *Generalkommissar* for Administration and Justice in the Netherlands, writing on 5 September 1941,

With the establishment of a Central Register of Jews and Jewish half-breeds by the Registration Office in The Hague there has been created an instrument and a central information bureau . . . whose use I recommend and request in all cases of doubt. Close links between the Central Register and the Municipal Registration Offices in the Netherlands ensure the speedy detection of all changes (of residences, for instance) and thus guarantee that the register at all times reflects the actual state of affairs in individual cases and for statistical purposes. (Presser 1969: 38)

For his part, Lentz proudly wrote to the German authorities one month later, citing his office motto: "To record is to serve" (*ibid.*).

The Germans, with the assistance of Lentz and his colleagues, used this register to pursue work on both "individual cases and statistical purposes." The registration record and the related identity card were used directly in locating and apprehending Jews preparatory to their deportation from the Netherlands (Fein 1984: 266–267). The important role of the various registration and control systems developed by Lentz is also clear from the numerous efforts made by the Dutch resistance, particularly as the war advanced, to disrupt them. For example, in March 1943 one resistance group attempted to burn down the Central Population Registration building in Amsterdam and in April 1944, at the request of the resistance, the Royal Air Force bombed the population registration system building in the Hague with more success (De Jong 1965; Nobel 1998).

On the statistical side, the Dutch Central Population Registration Office under Lentz produced a report in 1942, *Statistical Record of Persons of Jewish Blood in the Netherlands*, presenting data on the number of Jews by nationality, locality in the Netherlands, and other characteristics and another volume on Jewish immigration into the Netherlands (Presser 1969:

220; Nobel 1998).⁸ Serving both the statistical and the operational uses of the register of Jews and related data systems was a series of maps issued by the Amsterdam Municipal Bureau of Statistics in March 1941 showing population density of the Jewish and non-Jewish population by district (Presser 1969: 216) and a “List of Family Names of Persons of Jewish Blood” issued by Lentz’s office in March 1942 (ibid.: 301; Nobel 1998). An earlier version of these so-called dot-maps played a major role in the February 1941 attacks aimed at certain Jewish residential areas of Amsterdam, while the list of Jewish family names was developed to assist in identifying Jews (Nobel 1998). After the war, Lentz was convicted by a Dutch court and sentenced to prison for three years for his wartime activities (Fein 1984: 267; Aly and Roth 1984: 67). The charges against him centered on his role in developing the new rationing control card at the end of 1943, rather than his earlier work (Nobel 1998).⁹

Although Lentz was portrayed by Presser as simply a zealous bureaucrat, he and his work on population registration were well known among English- and German-speaking government statisticians and demographers. A few years before his success in registering the Jews of the Netherlands, Lentz, together with H. W. Methorst, Director-General of the Dutch Central Bureau of Statistics, had informed the statistical and demographic communities about the new Dutch population registration system, including its value as a source of population statistics. The first version of their paper (Methorst and Lentz 1935) appeared in an early issue of an occasional journal, *Population*, issued by the predecessor to the International Union for the Scientific Study of Population. Methorst also gave a brief report on the new system at the 1935 International Population Conference held in Berlin (Methorst 1936a). In 1936, versions of this paper appeared in the *Journal of the American Statistical Association* (Methorst 1936b) and in a leading German statistical journal (Methorst and Lentz 1936). Moreover, the editor of the German statistical journal himself presented a paper at the 1937 International Population Conference in Paris (Zahn 1938), citing Methorst and Lentz (1936) and stressing the potential usefulness of the Dutch population registration system for “needed racial hygienic purification” (Nobel 1998, citing Seegers and Wens 1993: 90–91).

In a follow-up communication to the *Journal of the American Statistical Association* reporting on the rapid progress being made in the implementation of the new population registration system, Methorst highlighted several advantages of the new system, which in his words followed each individual “from the cradle to the grave.” Among the specific uses he identified was the system’s potential as a cost-effective replacement for the traditional population census. He also commented that

The system opens up wide perspectives for simplification of municipal administration and at the same time social research. On behalf of science, a

Demographic and Genealogical Archive is gradually being created of great importance. (Methorst 1938: 714)

Other than his reference to science, Methorst did not further specify how such an archive would be used. Despite such ambiguities and his strong support for the population registration system as a source for statistical and administrative data, Methorst throughout his career was reportedly concerned with protecting the confidentiality of responses to statistical inquiries. For example, in the case of the archive, he emphasized the procedures used to ensure the confidentiality of medical diagnoses (Methorst 1940). Moreover, preparatory work on the archive was halted at the outset of the German occupation (Nobel 1998). Lentz, on the other hand, although not a member of any Nazi or other known anti-Semitic group, seemed to be motivated solely by his dream of the value of a complete registration system, undeterred by the uses the Germans made of it (Moore 1997: 198–199).

Lentz wrote a book on the new system (Lentz 1936) that received a favorable review in the *American Sociological Review* from a highly regarded demographer, Dorothy Thomas (Thomas 1937). In January 1938, as reported in a note in *Population Index* (Vol. 4, no. 2: 70), “a new [monthly] demographic journal, *De Bevolkingsboekhouding* (Population Bookkeeping), made its appearance . . . under the editorship of J. L. Lentz, Royal Inspector of Population Registers. Its purpose is to further ‘insight into the aim, significance and value of population accounting.’” The note also referred to an editorial in the new journal, “Peace after conflict,” which described the 40-year struggle that led to the introduction of the new system permitting one to “follow each person from birth to death through his various communities of residence and contain[s] a cumulative record of his demographic experience.” According to the citations in Seegers and Wens (1993: 141), the journal continued publication until at least January 1944.

Norway

In October 1941 the Germans instructed the Norwegian authorities to prepare a regulation requiring the identity cards of Jews to be marked distinctly. The police issued such an order in January 1942, along with related guidance as to who was to be classified a Jew (Abrahamsen 1991: 95). This order was announced publicly on 22 January 1942 and by this time plans were already underway to carry out a special census among all persons classified as Jews. The census questionnaire “consisted of four pages which, in addition to vital data, also asked whether one belonged to a religious society and asked for detailed information about one’s economic situation. The last page had to be filled out by the local police . . . ” (ibid.: 96). After they were printed, 12,000 blank questionnaires were sent to the statisti-

cal office of the Norwegian national socialist political party, Vidkun Quisling's *Nasjonal Samling* party. Subsequently, the questionnaires were dispatched to the police and sheriff precincts throughout the country for completion.

Information obtained from the completed questionnaires was employed directly some months later in generating the lists used in the mass arrests of Norwegian Jews, which began in late October 1942 (*ibid.*: 102, 110, and 120) with the statistical office of the *Nasjonal Samling* again playing an active role (*ibid.*: 105). On the statistical side, at the end of 1942 the same office, *NS Statistiske Kontor*, under the direction of "engineer [Siegfried] Nylander" (Mendelsohn 1987: 54; Søybye 1998) issued a report, "Jews in Norway: Graphical presentation of the number of full Jews according to occupations based on the census of Jews carried out at the beginning of 1942" (Abrahamsen 1991: 3 and 54).

The decision by the Germans to work through the party statistical office in Norway may well have been motivated by their sense that the Norwegian national statistical office was politically unreliable from a Nazi perspective (Nordboten 1997). In fact, the Director-General of the national statistical office, Gunnar Jahn, was a leader of the Norwegian resistance. In addition, nearly the entire the staff were anti-Nazi. When Jahn was arrested in 1944, his Nazi-appointed replacement never showed up because he was aware of the lack of cooperation he would have received (Bjerve 1998). Jahn, who survived his imprisonment in a concentration camp, served as Director-General of the Norwegian statistical office from 1920 to 1945. Among his many non-statistical responsibilities, he served from 1942 to 1966 as chair of the Norwegian Nobel Committee responsible for awarding the Nobel Peace Prize. Recent research by Søybye (1998), however, indicates that the role of the Norwegian statistical office and Jahn may have been more complex than portrayed here.

Himmler's statistical overview

Large-scale and complex governmental programs, including genocides, may be assisted by data on progress achieved. Such data are used to assess how well the program is doing and how it can be improved and to defend it against those who question its wisdom or effectiveness. During the Holocaust many of the responsible Nazi authorities, both civilian and military, routinely reported information on the number of Jews killed in the course of specific actions or the numbers transported to concentration camps (see, for example, the operational reports cited by Hilberg 1985: 1211–1216 and many of the documents indexed under "statistics on extermination and deportation" in Robinson and Sachs 1976: 234).

It is difficult, however, to be certain about the quality of these figures, which are subject to many of the limitations usually associated with ad-

ministrative-based program data or enemy casualty figures generated by the military. For example, Hilberg (1985: 1203), commenting on the “shooting statistics [that] were produced by the SS and police units, especially the *Einsatzgruppen*,” observed that “at times these formations seemed to justify their existence with numbers,” and he, along with others, noted many gaps in the data (see, generally, Hilberg 1985: 1201–1220 and Fein 1981).

On balance, with respect to the reports of the *Einsatzgruppen* themselves, Headland (1992: 176) concluded that “ultimately, it is probable that the reports err on the side of incompleteness, rather than being an exaggerated version of what happened.” Factors cited by Headland as offsetting the inevitable exaggerations included the reporting system’s failure to cover many mass shootings (ibid.: 272) and specific efforts by some of those involved to guard against exaggeration (ibid.: 170). For example, the head of one of the four *Einsatzgruppen*, Otto Ohlendorf, stated in an affidavit (Robinson and Sachs 1976: NO-2856) that he tried to keep the number killed by each group in his command secret “in order to prevent the *Kommando* leaders from making a contest out of it and reporting larger numbers than had actually been executed” (*Trials* 1949–1953: (4) 134). This informed approach to a data quality problem may be attributable to Ohlendorf’s graduate training as a social scientist, in sociology according to his university records (Müller-Hill 1996: 76), and to his work in compiling economic and public opinion data for Himmler both before and after his service as the commanding officer of *Einsatzgruppe D* (*Trials* 1949–1953: (4) 227–240).

Himmler also expressed misgivings about the quality of some of the available numbers and sought expert advice, although it is unclear whether he considered them too low or too high (Hilberg 1985: 1204–1205). In an instruction dated 18 January 1943, Himmler gave this assignment to Dr. Richard Korherr, his Inspector for Statistics (Wellers 1978: 145; Fleming 1984: 135–136; Robinson and Sachs 1976: NO-4790). On the same date Himmler wrote to Ernst Kaltenbrunner, by now Head of the Reich Central Security Office, informing him of Korherr’s assignment and stating that Kaltenbrunner’s “Office is hereby relieved of its statistical responsibilities in this area, since the statistical materials submitted to date have consistently fallen short of professional standards of precision” (quoted in Fleming 1984: 136). Korherr’s first statistical report on this subject was dated 23 March 1943 (ibid.; Reitlinger 1968: 534; Robinson and Sachs 1976: NO-5194; Wellers 1978: 145). The full text of this report in German and English is given by Wellers (1978: Appendixes A and B, 165–188); an excerpt also appears in Arad, Gutman, and Margalio (1981: 332–334). Eichmann’s recollections of Korherr’s assignment and report are also available (Lang 1983: 112–115).

This 16-page report presented data up to 1 January 1943 based on German and other European census statistics, data from Jewish commu-

nity organizations working under the supervision of the Reich Central Security Office, figures prepared by the Reich Central Security Office itself, and Korherr's own estimates. It included data on changes within the Jewish population of Germany, the number of Jews "evacuated," Jews remaining in the ghettos, nonevacuated Jews in concentration camps, and Jews in penal institutions and "involved in works projects." Data on evacuations were shown by place or country of origin and destination, with the largest single group, over 1.4 million, listed under the euphemistic rubric "transportation of the Jews from the eastern provinces to the Russian east" (Wellers 1978: 183). Headland (1992: 105) considers the approximately 633,000 persons given by Korherr as the Jews "evacuated" in Russian areas to be the total of *Einsatzgruppen* killings up to the end of 1942. (Korherr himself identifies this number, in language that is both more precise and more opaque, as "the figures provided by the Reich Main Security Office [RSHA] for the evacuation of Jews from the Russian territories including the formerly [independent] Baltic countries since the beginning of the Eastern campaign" (Wellers 1978: 184).)

After receiving Korherr's first report, Himmler further ordered him to prepare "a condensed report with rigorous numerical data to be shown to the Führer" (Wellers 1978: 207–208). This seven-page report (*ibid.*: Appendixes C and D, 195–210; Robinson and Sachs 1976: NO-5193), which was apparently completed a few days before 19 April, contained much the same material as had been in the earlier report, with selected data updated to 31 March 1943. Both the tabular and text portions of this version of his report seem clearer and more focused than his earlier, longer report. Korherr's "necessary preliminary remarks" on the quality of the data provide some insight into his perspective. He observes that among the sources of error affecting the "statistical analysis of Jewry" are

the character and development of Judaism, its definition, the many thousand years of restless wandering, the numerous conversions to and from Judaism, the efforts toward integration, the miscegenation with the native population and above all the efforts of the Jews to avoid registration. . . . [As a result,] errors of classification tend to vary in inverse proportion to the amount of Jewish blood. (Wellers 1978: 202)

A copy of this report was returned to Eichmann with a note from Himmler, "The Führer has taken note, destroy" (Lang 1983: 113; Fleming 1984: 135–139).

Reitlinger (1968: 534) considered Korherr's report ". . . one source of inestimable value in dealing with debatable figures. . . . This report tallies with so many counter-checks that reliability may be assumed even where counter-checks are lacking." Similarly, Hilberg (1985: 1204) considers that "the keystone of all the German records is the recapitulation by the SS

statistician, Dr. Richard Korherr." Wellers (1978: 148), making use of the added information in the condensed report about the first quarter of 1943, also considered Korherr's data to be highly reliable.

No subsequent reports from Korherr have been identified, although in the covering letter that forwarded his March report to Himmler's office Korherr volunteered "to produce a definitive elaborated report with flawless numerical material and unassailable figures as to numerical development of Jewry, perhaps at best as of July 1, October 1 or December 1, 1943, after careful preparation of the presently still very contradictory numerical data" (Wellers 1978: 190; Sereny 1995: 346). Hilberg (1985: 1206) reports that Eichmann testified at his trial that no final summary was prepared for 1944 or 1945, although statistics of new deportations were assembled.

Prior to his work for the SS, Korherr was a well-established demographer and statistician. He wrote and published extensively beginning in the late 1920s. For example, Reitlinger (1981: 221) noted, apparently based on a memoir Korherr prepared for him in 1955, that as early as 1927 Korherr had written "an essay . . . in a Bavarian journal on population shrinkage and its causes. [The essay] had impressed Himmler so much that in 1935 he had republished it himself with his own preface." Glass (1967: 220, 274) refers to the first two editions of this work (Korherr 1927, 1928) and the discussion it aroused. Korherr's work also greatly impressed Mussolini, who wrote the preface to the Italian edition published in 1928 (Zahn 1937–38; Glass 1967: 220).¹⁰ (One also finds a number of entries under Korherr's name in the early volumes of *Population Index* and its predecessor, *Population Literature*, beginning with Vol. 2, no. 1, 20 January 1936.)

In 1936 Korherr was appointed director of statistics for the municipality of Würzburg.¹¹ He was also a participant at the 1935 and 1937 International Population Conferences held in Berlin and Paris, respectively, with his papers published in the proceedings of both Conferences (Korherr 1936a, 1938a, 1938b). His population policy paper from the Paris Conference (1938a), moreover, was cited to substantiate a point in an authoritative postwar demographic text (United Nations 1953: 23).

In 1938, the annual meeting of the German Statistical Society was held in Würzburg, allowing Korherr to host the leading figures of German statistics (*Allgemeines Statistisches Archiv* 1938). Among the participants at the meeting were Roderich Plate and Friedrich Burgdörfer, whose Holocaust-related work has already been described, as well as Professor Friedrich Zahn, who was simultaneously the Society's President, President of the Bavarian State Statistical Office, Professor of Statistics at the University of Munich, editor of *Allgemeines Statistisches Archiv*, the immediate past President of the International Statistical Institute, and a strong supporter of Korherr in the 1920s and 1930s. Aly and Roth (1984) provide further biographical information on Zahn (pp. 28–29), Burgdörfer (pp. 29–32), Korherr (pp. 32–35), and Plate (pp. 60–61).

After meeting with Himmler in early 1939 and carrying out several assignments for him during 1940 as an “independent retainer” (Aly and Roth 1984: 32), Korherr was appointed Statistical Inspector for the *Reichsführer SS* (i.e., for Himmler) in December 1940 (Reitlinger 1981: 221; Höhne 1970: 433; Wilhelm 1990). The initial idea for this appointment appears to have been Himmler’s, and Korherr considered it a “glorious” opportunity (Aly and Roth 1984: 32). In October 1940 he developed a written proposal for a statistical activity under Himmler in which he indicated that “I can see a meritorious personal assignment whereby I could work for the organization in unobtrusive scientific study” of the population resettlement project. In this connection he argued that

[S]tatistics that penetrate to the heart of the great event, need as precise a scientific basis as possible which would necessarily grow out of collaboration with the various institutes . . . and out of a critical examination of the generally contradictory statistics. . . . It would initially be a matter of collecting and arranging and scientifically checking and evaluating the data thus obtained, then a matter of its scientific interpretation and evaluation of its practical application so that, finally, the best and the most reliable data attainable for the purposes of resettlement and the consolidation of the German people as a whole would be available in this office. (ibid.: 33)

By late 1942 or January 1943 Korherr received the assignment to prepare the “balance sheet of Jewry.” According to Korherr, sometime after August 1943, following a series of disputes with SS officials who felt threatened by various internal studies he was carrying out, Himmler established a statistical research institute for him near Regensburg (Höhne 1970: 434; Reitlinger 1981: 222). Indeed, the 1 November 1944 Directory of the SS did include a listing for the “Statistical Research Institute of Reichsführer SS” that was located near Regensburg (Office of the US Chief of Counsel 1946: (5) 414, PS-2796). The last statistical report by Korherr, so far identified, is a September 1944 memorandum to Himmler giving figures on the number of SS staff (Hilberg 1985: 200–201; Robinson and Sachs 1976: NO-4812), although Aly and Roth (1984: 34) refer to some later, more bombastic and ideological reports during the winter of 1944–45.

After the war, Korherr’s reported reflections on his wartime experiences underwent an apparent transformation. Reitlinger (1981: 222–223), citing Korherr’s 1955 memoir, reported in a study first published in 1956 that

Dr. Korherr himself, now happily denazified and employed by the West German Finance Ministry, claims that he was never permitted to know the truly murderous significance of his own balance sheet.

Wilhelm (1990) states that Korherr lost his ministerial job after Reitlinger’s book was published. Hilberg (1985: 1205–1206), citing a number of state-

ments Korherr made between 1951 and 1965 in connection with official investigations, was more skeptical than Reitlinger about Korherr's

assertion that he did not even understand the figures in his report or that he did not realize that *Einsatzgruppen* killed people. Throughout the post-war years, Korherr as a potential witness or defendant in West German court proceedings was a frightened man, and ignorance was his banner.

Based on an interview with him in 1966 and a review of his papers, Höhne (1970: 433–434) concluded that Korherr was “a devout Catholic and one of the most brilliant statisticians of the Reich,” who was “shy . . . and sensitive” and really in over his head among the corrupt and cynical SS bureaucrats.

By contrast, when Sereny (1995: 346) talked to Korherr in 1977, she recorded his observation that

everybody in Germany knew about the gassings. Good heavens, the sparrows were whistling it from the rooftops. Let no one tell you differently.

The Nuremberg trials

The question of how data and analysis were used at the Nuremberg War Crimes Trials to prosecute the major Nazi figures, an important one for those concerned with prosecutions for genocide or other crimes against humanity in the late 1990s, is relatively easily answered.

Count one of the indictment against the major defendants at the International Military War Crimes Tribunal at Nuremberg, issued 18 October 1945, dealt with their “participating in the formulation or execution of a common plan or conspiracy to commit . . .” crimes against peace (Taylor 1992: 648 and Appendix B). As read by Deputy US Prosecutor Sydney Alderman, this count asserted *inter alia* that “of the 9.6 million Jews who lived in the parts of Europe under Nazi domination it is conservatively estimated that 5.7 million have disappeared, most of them put to death by the Nazi conspirators” (IMT 1947: (2) 36).

The opening statement of Robert Jackson, Chief US Prosecutor at Nuremberg, delivered 21 November 1945, in addressing “Crimes against the Jews” under count one of the indictment, not only referred to these figures, but also introduced some analytical discussion of them (IMT 1947: (2) 119):

Of the 9,600,000 Jews who lived in Nazi-dominated Europe, 60 percent are authoritatively estimated to have perished. Five million seven hundred thousand Jews are missing from the countries in which they formerly lived, and over 4,500,000 cannot be accounted for by the normal death rate nor by immigration [sic]; nor are they included among the displaced persons. . . . I advert to

[these figures] only to show their magnitude as evidence of a purpose and a knowledge common to all defendants, of an official plan rather than of a capricious policy of some individual commander, and to show such a continuity of Jewish persecution from the rise of the Nazi conspiracy to its collapse as forbids us to believe that any person could be identified with any part of Nazi action without approving this most conspicuous item of its program.

It seems clear that Jackson had some sort of expert demographic advice to arrive at his estimate of over 4.5 million deaths beyond those accounted for by normal mortality and emigration. However, the source of this expertise has not yet been identified.

Reitlinger (1968: 533) asserted that “the figure used at Nuremberg was supplied by the World Jewish Congress at a moment when few reputable data were available,” although it is unclear which of the several figures cited at Nuremberg he was referring to; he also referred to the report of the Anglo-American Committee of Inquiry (1946: 65–66), an inter-governmental committee established to examine ways of resettling Jewish refugees who had survived the Holocaust, which implied a loss between 1939 and 1945 of 5.7 million in the Jewish population of Europe. Both of these sources would have been highly unlikely as the basis for Jackson’s estimate.

An estimate of 6 million Jewish deaths was only mentioned by the prosecution after it obtained an affidavit from Dr. Wilhelm Höttl, a colleague of Eichmann’s at the Reich Central Security Office (see below). The analyst responsible for any data from the World Jewish Congress is likely to have been Jacob Lestschinsky. His estimate that 6 million European Jews had died since 1939 was first presented in early 1945 (*New York Times*, 8 January 1945: 17), well before the trial began. This appears to be the first public reference to the estimate of 6 million deaths and seems to have been based on a comparison of the number of European Jews alive in 1939 with the number of estimated survivors (Lestschinsky 1946). Lestschinsky (1876–1966), although little-known today, had an extensive career covering a variety of fields, including population statistics, in Russia, Germany, Poland, the United States, and Israel (see *Encyclopaedia Judaica*, s.v. “Lestschinsky, Jacob”). A 1927 paper of his was even quoted by Korherr in his 16-page report prepared in early 1943 for Himmler (Wellers 1978: 187). The estimates of the Anglo-American Committee of Inquiry could not have been the source of estimates used at the trial since the Committee did not begin its work until January 1946 (1946: vii), two months after Jackson cited the 5.7 million figure.

Robert Jackson, along with the other prosecutors, frequently referred to estimates or counts of Jews killed in specific localities (e.g., countries, regions, towns, ghettos, camps) throughout the trial, and he returned to

statistics on the total number of Jews killed in the Holocaust in his closing statement in July 1946. By this time the prosecution had been better able to digest the massive amount of materials obtained by the investigative staff, including an affidavit by Höttl about a conversation he had had with Eichmann (for the text of the affidavit see Office of the US Chief of Counsel 1946: (5) 380–382, PS-2738). On the basis of this affidavit, Jackson was then able to say

Adolf Eichmann . . . has estimated that the anti-Jewish activities resulted in the killing of six million Jews. Of these, four million were killed in extermination institutions, and two million were killed by *Einsatzgruppen*, mobile units of the Security Police and SD [Security Service of the SS]. . . . (Jackson 1947: 130)

Höttl's affidavit is dated 26 November 1945, four days after Jackson made his opening statement. Eichmann's reported estimates, based on the Höttl affidavit, were first referred to by Assistant US Prosecutor William F. Walsh in his statement to the tribunal in mid-December 1945 (Taylor 1992: 202). On its face, Höttl's affidavit appears to contain several inconsistencies, although it is unclear whether these are attributable to Höttl himself or to Eichmann's self-professed unreliability concerning dates and numbers. In his affidavit Höttl states that the conversation with Eichmann took place in August 1944, yet he asserts that Eichmann said that Himmler "*would* [emphasis added] send someone from his Office of Statistics . . . to make a new report . . . in which exact figures should be worked out." For his part, during his interrogation in Jerusalem in the early 1960s, Eichmann estimated "one way or another, about six million Jews must have been killed" (Lang 1983: 110), but that any information he gave Höttl would have been based on Korherr's finding that "five million" had been killed (1983: 119, 112).

During his trial, Eichmann disowned both the 5 and 6 million figures and any direct knowledge of Korherr's study (Ministry of Justice 1993: 1561). In fact, while the numbers in Korherr's reports are fully consistent with a final estimate of 6 million victims, as would be expected for reports prepared in the first part of 1943, neither report mentions the 5 or 6 million figure. August 1944 also seems premature for Höttl's estimate of 6 million since organized killing in some camps continued beyond that date, but not for Eichmann's "five million" figure. Indeed, it appears that both Eichmann and Höttl had a reasonably accurate picture of the final total, whatever confusions they spun out about their respective sources. Eichmann, moreover, had a reasonably reliable running total of persons transported, which was a good predictor of the number of Jews killed. As Eichmann explained it, his office received current reports on "evacuation

and shipment figures. . . . And from those figures [Rolf] Günther [Eichmann's deputy] drew up a graph on the wall of his office . . . , everyone who came into that office could see it, a long thick line" (Lang 1983: 113).

The tribunal in its written judgment, citing Eichmann as the source, quoted the 6 million and 4 million figures at the end of a section dealing with the "Persecution of the Jews" (IMT 1947: (22) 496). Data on the number of Jewish deaths and deportations, moreover, were mentioned in the judgments of the tribunal concerning several of the individual defendants found guilty on one or more counts (1947: (22) 524–587). For example, the tribunal in its judgment on Ernst Kaltenbrunner, who was found guilty on two counts and sentenced to death, listed among the reasons for its decision that

approximately six million Jews were murdered, of which two million were killed by *Einsatzgruppen* and other units of the Security Police. . . . The murder of approximately four million Jews in concentration camps has heretofore been described. This part of the program was also under the supervision of the RSHA [Reich Central Security Office] when Kaltenbrunner was head of that organization. (1947: (22) 538)

Reitlinger (1968: 534) also indicated that "figures compiled for Heydrich and Himmler . . . became the gruesome exhibits of later Nuremberg trials." Headland (1992: 159–176), in far more specific terms, provided detailed information on the highly effective use made of the *Einsatzgruppen* reports, and the statistics they contained, in the trials of those operationally responsible for that aspect of the Holocaust. The impact of these numbers, and the reporting system that generated them, is clear from the opinion of the court in the so-called *Einsatzgruppen* Case (*Trials* 1949–1953: (4) 427):

[T]he mention of one million deaths produces no shock at all commensurate with its enormity because to the average brain one million is more a symbol than a quantitative measure. However, if one reads through the reports of the *Einsatzgruppen* and observes the small numbers getting larger, climbing into ten thousand, tens of thousands, a hundred thousand and beyond, then one can at last believe that this actually happened—the cold-blooded, pre-meditated killing of one million human beings.

Despite the frequent references to data throughout the trials, the prosecutors made relatively little use of documents containing statistics or describing statistical systems as exhibits in the early trials. Several factors probably account for this. First, the prosecution had to carry out its initial investigations and prepare its first cases in a limited period of time and in the chaotic conditions that existed in Europe in 1945 (Taylor 1974). It has

been observed that most international tribunals face the same challenges of time pressure and of chaos and dislocation (Spirer and Seltzer 1997). Second, the Holocaust was not really part of the original judicial agenda of the Nuremberg tribunal, although during the course of the first trial it emerged as an important element. Third, the prosecution was probably unaware of the potential value of looking for statistics and statistical systems, not just to describe the scope of the crime but to provide strong evidence of the deliberate, systematic, and genocidal nature of the killing of the Jewish population of Europe. These systems formed a tangible and identifiable part of the administrative processes used to define, concentrate, and annihilate the Jewish population (Hilberg 1985: 53–62). Both the Wannsee Protocol and the Korherr report, moreover, underscore prosecutor Jackson's statement about "evidence of a purpose and a knowledge common to all defendants."

Discussion

It should be understood that this article was not based on an exhaustive study of materials on the Holocaust or the Nuremberg trials. It was further limited by the fact that I am not a trained historian and was working primarily with materials available in English. I had, on the other hand, one advantage. As a specialist in population statistics with experience in one current genocide investigation and prosecution, I could more readily assess the relevance of what I read to the issues at hand than could most historians or political scientists.¹² It is clear that a wealth of material pertaining to statistical and demographic issues appears to have gone unnoticed, and at times to have been misinterpreted, by those unfamiliar with population statistics. For me, the conclusions to be drawn from these materials are largely self-evident and are set out in the final section of the article with little further comment or justification. However, there are two areas where I believe elaboration is necessary. The first concerns our ignorance about the past and the second concerns what, if any, policy implications about the organization and work of a national statistical service can be drawn from events described above.

Clearly, some of what has been written about the Holocaust has touched on statistical and demographic topics. As a rule, however, experienced statisticians and demographers have addressed only the estimation of Holocaust mortality, while everything written about the association of statistical operations, methods, and personnel with the Holocaust has been written by victims, survivors, perpetrators, historians, and political scientists without detailed knowledge of the field of population statistics. As a result, some of what has been written is incomplete or incorrect.¹³ More seriously, nothing about how population data systems were used to further the Holocaust appears in the current statistical or demographic litera-

ture or seems to have explicitly entered into recent international debates on statistical policy. Admittedly, the period of Nazi domination of Europe put all governmental institutions to the test and, in many countries, most were found wanting. Nevertheless, unless we are clearly aware of what went wrong, we can do little to protect the public and ourselves from grave potential abuses of our own technology and methods. (For example, policy discussions about nuclear safety and technical work on nuclear power do not ignore the events at Three Mile Island or Chernobyl, even though they are recognized as rare.)

A few examples can serve to illustrate this near-complete silence about the subject by statisticians and demographers at international forums. First, given that the 1939 German census was used to identify future victims of the Holocaust, I find it surprising that this experience went unmentioned in reports of the debate leading up to the postponement of the 1983 German census (Butz 1985) or at a 1987 conference organized by the German Statistical Office dealing with the rescheduled census (Butz and Scarr 1987).¹⁴ Second, the report of a 1987 conference organized by Statistics Sweden (1987) on respondent concerns about providing data for official statistics is also silent on the Holocaust experience that touched many of the countries participating, although several attendees including the Directors-General of both the German and the Dutch Statistical Offices acknowledged that the potential for serious abuses existed. Third, given how population registration and related systems were used in the Netherlands between 1940 and 1945, it is disturbing that in a paper about recent Dutch experiences in gathering population statistics prepared for an international audience only the statistical advantages of a registration-based system are mentioned, with no hint of the potential for abuse or discussion of possible safeguards (van Bochove 1996).¹⁵ Fourth, a detailed report by a panel of the Committee on National Statistics and the Social Science Research Council (National Research Council 1993) that provided long-term policy recommendations on confidentiality and accessibility of US government statistics discussed only the essentially benign experience of the United States, Canada, and the post-World War II developments in the democracies of Western Europe. Fifth, a report, "Politics and statistics" (Seltzer 1994), that attempted to review and document major abuses of official statistics and official statistical systems in countries around the world ignored the events discussed here, except for brief references to the misuse of the 1939 German census and the 1940 US census. Finally, since the 1930s at least, international scientific meetings of demographers and statisticians have extensively discussed the technical merits of population registers and related data systems. Yet these same scientific meetings have rarely considered the vulnerability of such systems to gross abuses such as those that have been reviewed in this article. Similarly, no such discussions took place at the

United Nations Statistical Commission over the past 25 years, even when it adopted the Fundamental Principles of Official Statistics (United Nations Economic and Social Council 1994).

For many, the silence arose out of ignorance of the role that statistics and statistical systems played in the Holocaust. At least in the United States, the silence has also been justified by some statisticians and demographers on a variety of grounds: first, the perceived probability of the contemplated disaster is low; second, public discussion of the issues would stimulate paranoid fears of governmental conspiracies; third, such a discussion might raise undue public concerns about a host of benign statistical programs; fourth, if any public policy issues do arise, they are general in character, with no special relevance for statisticians and demographers; and finally, statisticians and demographers who work for the government might be deemed disloyal if they were to develop and maintain procedures to protect against misgovernment. (For a discussion of the tension that can arise between the expectation that government statisticians will “follow orders” and the requirements of ethical norms, see Seltzer 1994: 23 and 25–26.)

In Europe, where there is greater awareness of what happened during the Holocaust, if not always explicit knowledge of how it happened, privacy concerns are strong in a number of countries. Indeed, Flaherty (1989: 373–374) considered that in Europe

data protection laws include the hidden agenda of discouraging a recurrence of the Nazi and Gestapo efforts to control the population, and so seek to prevent the reappearance of an oppressive bureaucracy that might use existing data for nefarious purposes. This concern is such a vital foundation of current [data protection] legislation that it is rarely expressed in formal discussions. . . . Thus European legislators have reflected a real fear of Big Brother based on common experience of the potential destructiveness of surveillance through record keeping. None wish to repeat the experiences endured under the Nazis during the Second World War.

Despite these public concerns, European statisticians have sometimes argued that it would not be wise for official statisticians to disquiet the public by discussing these issues, lest response rates in statistical operations and access to administrative data be adversely affected.

I would argue that a policy of silence, however well intentioned, only perpetuates ignorance and increases the difficulties that sound statistical programs will face when the events of the past are raised by those attempting to discredit such programs. Such a policy is also open to question on both ethical and legal grounds, given that “I didn’t know” and “I was only following orders” are only limited defenses against murder or genocide. As an alternative to ignorance or silence, it is important to examine possible past abuses and to assess the potential for future abuses. For these reasons,

the decision of the French statistical authorities, referred to earlier, to thoroughly examine the possible role of statistical systems and methods in France in furthering the Holocaust is commendable, as are the decision of the German Statistical Office to commission a study of the 1939 German census (Kopsch 1998) and the decision of Statistics Norway to publish S bye's (1998) recent study.

Several attempts have been made to use assessments of the relative strengths and weaknesses of different methods of gathering population statistics (see, for example, National Research Council 1981: Tables 1.3, 1.5, and 1.6) to guide decisionmaking about the rational use of complementary data sources. These comparisons focused on such factors as timeliness, subject matter and geographical detail, accuracy, and flexibility, all factors related to the usefulness of the data produced by the system. Population data systems may also be assessed in terms of their potential for abuse in extreme situations. The results of such a comparison, presented in Table 1, are based on the following factors: (1) all persons in the population being covered by the system, at least in principle, (2) ease of use of definitions and classifications based on legal or administrative considerations, (3) the timeliness of the information available from the system, and (4) the accuracy of the information available from the system. Each of these factors contributes to a system's suitability for targeting a desired segment of the population for persecution or genocide.

The major conclusion one can draw from these summary assessments is that the traditional population census, the system most closely associated with potential abuse in the public's mind, rates comparatively low in

TABLE 1 Comparison of population statistics data systems in terms of their potential for placing individual data providers at risk for human rights abuses

System	Entire population included	Legal definitions easy to apply	Timeliness	Accuracy ^a
Population census	High	Low	Low	Varies
Population sample survey	Low	Low	Medium/High	Varies
Population register	High	High	High	Varies
Vital registration system ^b	Varies	High	High	Varies
Special census ^c	High	Low	High	Varies

^aAccuracy here refers to paucity of response error on specific items. The common rating of "Varies" obscures some clear-cut differences among the systems. For those few items on which an administrative system, such as a population register or civil registration system, places special emphasis, very high standards of accuracy are often achievable. However, for other items the quality of response is often far poorer. On the other hand, in general population censuses quality will typically be a function of how well the questions are understood. Overall, the accuracy of the responses in a general population census is likely to be far lower than comparable survey responses.

^bCovers primarily live births, deaths, marriages, and divorces.

^cSpecial censuses may be organized to reenumerate a jurisdiction where rapid population change has taken place or where large numbers of a special population are located.

terms of “high-risk” factors. Indeed, as was shown earlier, although the 1939 German census may have played some role in the Holocaust, a monthly population canvass was required to keep it up-to-date and to fine-tune it to the desired target population.

On the other hand, population registration has the highest ratings in terms of the risk assessments shown in Table 1. This finding is consistent with the high mortality of Dutch Jews in the Holocaust (about 73 percent), particularly in light of the comparative mortality that Jews experienced in nearby Belgium (40 percent) and France (25 percent) (Moore 1997: 2). In seeking to explain this difference, Moore (*ibid.*: 195–196) observed that

one specific aspect of the Dutch bureaucracy looms large in the history of the Holocaust in the Netherlands and requires detailed analysis. This was the system of population registration which formed an integral part of the Dutch state machinery. Innocent enough in peacetime, this system became an ‘unfavorable factor’ peculiar to the Netherlands in its comprehensiveness. Neither Belgium nor France had such a complete registration. Moreover, the Dutch system was long established with its own specialist bureaucracy. . . . There is no question that the population registers in the Netherlands assisted the German occupiers in a number of important respects.

Specifically with respect to the Holocaust, Moore (*ibid.*: 196) identified both a direct role of the Dutch registration system in the compilation and checking of arrest and deportation lists and an indirect one. The latter arose because the very existence of the population registration system “made the Jews feel that there was little point in not cooperating with other forms of registration. Failure to comply would be identified from other records and lead to discovery and punishment” (*ibid.*: 256).

A population registration system also figured in at least one recent genocide. In Rwanda, personnel from Human Rights Watch obtained extensive documentary information from local government offices around the country concerning a population register and related reporting system that generated, *inter alia*, monthly statistical reports providing the number and basic demographic characteristics of the population, classified by ethnicity, in each local administrative area in the period prior to the 1994 attempted genocide of the Tutsi population (Des Forges 1996). Subsequent evidence indicates that information from the registration system was used to plan and assist in the implementation of the killing operations (Des Forges, forthcoming).

Given the role of population registration systems in at least some genocides and the far more uncertain contribution of regular population censuses, it is surprising that the public, parliamentarians, and the press tend

to focus their concern on the census rather than on the registration system. For example, in both the Netherlands and the German Federal Republic, primary public fear and hostility were concentrated on the census, rather than the registration system. As van Bochove (1996) emphasized, public hostility to the census in the Netherlands encouraged that country's statisticians to shift to a register-based census. This despite the fact that in any given year the data from a decennial census are, on average, between five and seven years old and have questionable legal standing, while registration-based data are essentially current and have legal standing.

Population or similar registers, where they exist and function well, serve a wide range of administrative purposes (for example, taxation and entitlement to various types of social insurance and benefits). These registers may also serve a number of statistical functions, as they can be the source of a wealth of population-based statistics on a current basis and provide the sampling frame for a variety of population-based surveys. In addition, in some European countries, population registers have now completely replaced traditional population censuses, as foreseen by Methorst (1938). Where such registers are widely used, it is sometimes argued that statistical policy issues are largely irrelevant as long as the statistical system and statistical uses are insulated from the administrative uses and users.

Even in normal times, however, a blurring of the statistical and administrative functions can occur, in appearance if not in fact. Those supporting the advancement of improved registration systems often stress the statistical and research advantages of these improvements (see, for example, Trsinar 1995 and van Bochove 1996). Indeed, in some cases the statistical and demographic uses may be more visible than the administrative uses. Moreover, frequently statisticians and statistical considerations play a prominent role in establishing the registration system.¹⁶ In these circumstances, it seems essential to consider explicitly the potential abuses of the system in making decisions on statistical policy. In recent years a number of persons concerned with such policy have been sensitive to and have written about general issues of confidentiality and privacy threats arising from official statistics (see, for example, Begeer, de Vries, and Dukker 1986 and National Research Council 1993). However, these discussions do not explicitly refer to the Holocaust and other events during World War II or to genocide more recently.

If we accept that population registers can facilitate genocide-based mortality (or can cause other harm to "a potentially censurable or vulnerable entity"—Begeer, de Vries, and Dukker 1986) and if we use registers to generate population statistics, do statisticians and demographers have a special responsibility to encourage the development of technological, as well as legal, safeguards against abuse? Again, I would answer this question in the affirmative. (That others in society, such as registration system admin-

istrators, also have special responsibilities does not absolve statisticians and demographers of their own responsibilities.)

Safeguards are built into a wide range of risk-prone activities: nuclear reactors that shut down automatically, atomic weapons that can only be armed through the positive action of two or more persons, or even seat belts that can protect us from our own and others' driving mistakes. Indeed, some European countries, as Flaherty implied, have introduced safeguards into the operations of their population registers. For example, in the Netherlands the registration system is deliberately kept as decentralized as possible (Begeer 1998), and in Norway safeguards were initially developed with the idea of limiting the usefulness of the system to a foreign invader (Brunborg 1998). However, without discussion of the actual harms that arose during the Holocaust and other genocides, it is difficult to be fully aware of the continued importance of up-to-date safeguards against serious abuses. Moreover, if the idea of population registers is promoted for export to other countries, then it is the responsibility of the exporters to ensure that the required safeguards are bundled into the system architecture and software.

The need for effective safeguards is even greater now than it was in the 1930s because of the widespread availability of powerful data processing technologies in both the developed and developing world and numerous examples of public- and private-sector efforts to use these technologies to maintain data bases covering all or large parts of the population. For example, echoing the enthusiasm and even the words expressed by Methorst (1938) 60 years earlier, a recent front page *New York Times* article (20 July 1998) referred to government

plans to assign every American a unique identifier, a computer code that will track every citizen's medical history from cradle to grave. . . . Proponents, including insurance companies and public health researchers, say that the benefits would be vast. . . . A national disease data base could be created, offering unlimited opportunities for scientific study.

Flaherty (1989) and the National Research Council (1993) have reviewed the challenges presented by some earlier public-sector data base efforts and experiences with related safeguards. (To date, public-sector data bases have seemed to pose a greater threat than those maintained by the private sector, probably because the former were the source of the most serious abuses in the past and because of their ability to use legal sanctions to improve their completeness and accuracy.) In addition to technological safeguards, other approaches to individual protection are available. The simplest method is to avoid collecting or storing information on "risk-prone" topics such as ethnicity, religion, mother tongue, or place of birth. (Unfortunately, in a

data base with a medical component, certain diagnoses may pose a risk of administrative or legal sanctions.) Statistical methodology itself also offers protections: for example, data bases can be based on probability samples rather than all members of the population, or random errors can be introduced into the values stored in a data base to make it difficult to link any record with a real person. Finally, a number of legal, organizational, operational, and personnel arrangements and procedures can foster individual protection.

Some of these protections are absolute (for example, information not collected cannot be misused, or data obtained for only a sample cannot be used to identify all members of a population). For most such protections, their effectiveness will depend on how they are implemented and what threats they must protect against. In this connection, it is instructive to recall that the aforementioned *New York Times* story about plans for a comprehensive medical data base quoted opponents of the proposed system as saying “the [identity] code smacks of Big Brother” (20 July 1998, p. 1). It is not surprising, given the silence referred to earlier, that the threats envisioned were expressed solely in terms of a fictional abstract image taken from George Orwell’s novel, *1984*, rather than by any reference to the historical experience of modern genocide.

Five conclusions

First, I believe I have demonstrated to those concerned with present and future investigations and prosecutions of genocide and related crimes against humanity that data and analysis can play a role in bringing the perpetrators of these crimes to justice. Estimates of Holocaust losses even in approximate terms were of assistance to the prosecution at Nuremberg and were cited by the tribunal in its decisions. As Minna Schrag, a former prosecutor with the International War Crimes Tribunal for Yugoslavia, observed at a 1997 conference on the use of quantitative data and analysis in international criminal tribunals (Center for the Study of Human Rights 1997), “data can help us tell the story of the crime.” A similar conclusion is the starting point of the handbook by Spierer and Spierer (1993).

Second, I hope investigators and prosecutors will see how they can go beyond their predecessors at Nuremberg by searching, from the start, for the data and the administrative and statistical systems that may have been part of the processes used to plan and carry out genocide. In many situations statistical outputs, systems, and methods are a necessary part of the effort to define, find, and kill an initially dispersed target population. Moreover, in those situations where such data or systems were used in planning and implementing genocide or related crimes, I hope I have encouraged prosecutors to see this as part of the evidence of criminal intent

and culpability and systematic criminal behavior. As has been shown, such evidence had a powerful impact at the Nuremberg trials. Since the personnel of international human rights, refugee, and humanitarian assistance organizations and related nongovernmental organizations are often the initial evidence gatherers, they, too, should be alert to the potential value of such evidence.

Third, I have sought to remind statisticians and demographers that there is an ethical dimension to their work. Richard Korherr was called in by Himmler because Himmler did not trust Eichmann's figures. Korherr certainly produced a good statistical report. But was he a good statistician? The ethical tradeoffs that statisticians and demographers need to address are usually more complex, or at least appear so, than those faced by Korherr. Nevertheless, it is useful to remember the examples of Korherr or J. L. Lentz when considering our own choices. Korherr does not appear to have been an early or active member of the Nazi party. Yet he, along with Carmille and Lentz, who were not party members, all demonstrated a professional zeal untempered by a full consideration of the consequences, in human terms, of their work. Similarly, David, Fleischhacker, and Höhn (1988: 89) attributed the willingness of German medical scientists, "even if they did not fully embrace Nazi racism," to teach anti-Semitic racial hygiene to the fact that they "welcomed the opportunity of translating their intrinsically theoretical research into government policy."

Fourth, I have reminded those concerned with potential misuse of the major data systems that produce population statistics of the need to examine and take into account the abuses that have occurred under aggressively malevolent governments, particularly given the singular ease with which population registration systems have been mobilized for genocidal purposes. Although some European countries have introduced various protective measures through privacy protection legislation, these measures seem to be aimed primarily at the comparatively minor abuses that occur under essentially benign circumstances. Are these protective measures adequate to deal with more widespread, systematic, and malevolent threats, including domestic tyranny or external occupation? If not, how can such measures be strengthened and extended to be up to that task? To answer these questions we must first overcome the half-century of near silence on the role played by population statistics, statistical and related data systems, and statisticians and demographers during the Holocaust. Current protective policies and official statistics have both been ill-served by this silence, whatever its source or motivation. In many senses, this conclusion is closely linked with the previous point related to our ethical responsibilities.

Finally, I hope I have also demonstrated that the subject is one that will benefit from further research. It seems obvious, given the misleading statements in several texts about the nature of the statistical operations

that took place during the Holocaust, that those knowledgeable about statistical operations and demographic methods must be actively associated with this research. The benefits of this research would be threefold. First, it would advance our knowledge and understanding of a little-explored aspect of the Holocaust and the Nuremberg trials. Second, it may assist those investigating and prosecuting future instances of genocide and similar crimes against humanity in seeking evidence concerning the use of statistics and statistical systems by the alleged perpetrators as well as quantitative evidence of the extent and nature of the crimes themselves. Third, it would lead to sounder statistical policymaking by broadening the information available on the most serious abuses of data-gathering operations in the population statistics field.

Notes

The underlying research for this article was greatly facilitated by the wealth of materials available in the Sidney Rosenblatt Holocaust Collection of the Fordham University Libraries. I am deeply grateful to Jane Berger, Helen Fein, Thomas Jabine, and Herbert Spierer for their encouragement and the many valuable comments and suggestions they made on earlier versions. I am also grateful to several others, now or formerly associated with their countries' national statistical systems, who provided valuable information and comments on those portions of the article dealing with specific national experiences. They include: J-E. Chapron, R. Lévy-Bruhl, and J-C. Milleron (France), G. Kopsch (Germany), W. Begeer and J. Nobel (Netherlands), and P. J. Bjerve, H. Brunborg, S. Nordbotten, and E. Søybye (Norway). In addition, I thank J-E. Chapron and Susan Ray for translating selected portions of *Le 'Fichier Juif'* (Rémond et al. 1996) and *Die restlose Erfassung* (Aly and Roth 1984), respectively.

1 My research was stimulated by a question, posed at a conference on the role of data and quantitative analysis in investigating and prosecuting genocide and other crimes against humanity, on the extent to which quantitative data were used at the Nuremberg trials. The 14 experts who participated were drawn from the legal, human rights, statistical, and demographic fields

(Center for the Study of Human Rights 1997). The initial motivation for the conference arose out of experience in the international tribunals for the former Yugoslavia and Rwanda as well as proposals now being considered by the international community for the establishment of a permanent international tribunal for crimes against humanity.

2 An enormous volume of documentation covering the entire Nazi period was gathered for possible use at the Nuremberg trials. Many documents are reproduced, some in their original language, some in translation, in one of several multi-volume publications. A few documents from three of these sources, IMT (1947), *Trials* (1949–1953), and Office of the US Chief of Counsel (1946), are cited in this article. A comprehensive listing and index of all documents and materials appears in Robinson and Sachs (1976). At the time of the trials each item was assigned a unique code consisting of one or two letters (e.g., NO, NG, PS) and a number. To assist readers in locating any Nuremberg item referred to in this article, the citation for each item also includes its document code.

3 For example, Reitlinger (1968: Annex I) cites data from censuses carried out in the 1930s in Czechoslovakia, Poland, and Yugoslavia; and Marrus and Paxton (1983: 100) remark that "religion and ethnicity had not been part of vital statistics in France for al-

most 70 years, although some incomplete data on Jews had been collected in the general census of 1941." Significantly, the most thorough review of national experience with asking questions about religion in population censuses was published in the leading German statistical journal (Buck 1937).

4 Reitlinger (1968: 535) ambiguously refers to the 1933 German population census as "a census of the pure Jews of Germany." Although Luebke and Milton (1994), drawing in part on Aly and Roth (1984), provide valuable information about the 1933 and 1939 German population censuses, particularly the data processing procedures and technology used, they do not have a clear understanding of the details of census operations or content. For example, they imply that the new Nazi regime decided in April, after taking power at the end of January, to launch the 1933 census in June as a new initiative (1994: 26). The 1933 German population census, as with any general population census carried out by a well-established national statistical office, had been in the planning stage for some time before Hitler became Chancellor. As indicated by Burgdörfer (1933: 145–146) the census had originally been planned for 1930, but was postponed first to 1931 and then to 1932 because of budgetary problems. Luebke and Milton (1994: 28) also label the tabulations based on the 1933 census item on religion a "special census of Jews."

5 There is also some misunderstanding about the nature of this census, which was formally titled the Population, Occupational, and Industrial Census of 17 May 1939. Edlund (1996: v–vi) asserts that this census was limited to "a census of the nation's non-Teutonic peoples," citing "authorities at the Bundesarchiv [Potsdam]" who maintained that "no general population census was ever planned for 1938–1939." As Burgdörfer (1938) and Plate (1939) state, a general census was first planned for 17 May 1938 and then postponed to 17 May 1939. The item on "racial Jews" was also included in the original plan. The most plausible explanation for the postponement of the census, and the one indicated by Burgdörfer and Plate, was the desire by Hitler to include Austria in the

geographic scope of the census after it was annexed by Germany in mid-March 1938, about two months prior to the original census date. Less plausible is Edlund's view that "fiscal difficulties" accounted for the delay. Several published outputs from the 1939 census were issued by the German Statistical Office between 1939 and 1944 on a variety of topics unrelated to Jews and other "non-Teutonic peoples" (see relevant issues of *Population Index*).

6 Burgdörfer was not, however, head of the German Statistical Office as suggested by Luebke and Miller (1994: 27). Between 1933 and January 1943, the president of the *Statistische Reichsam* was Dr. Wolfgang Reichardt. After his death, Curt Godlewski was appointed to this position (Wietog 1998).

7 She had well-established and well-connected relatives in the United States (see, for example, *Encyclopaedia Judaica*, s.v. "Berliner, Emile").

8 Despite the emphasis on the use of new technologies in related efforts in Germany and France noted by Aly and Roth (1984), Luebke and Milton (1994), and Rémond et al. (1996), it is probably simply a reflection of a common intellectual perspective that the introduction to this 1942 Dutch publication specifically mentions that the tabulations were produced by Hollerith machines (Nobel 1998).

9 One reason for this may be that it was only in February 1943 that the Prime Minister of the Government-in-exile in London explicitly prohibited any collaboration by Dutch civil authorities with the occupying power. Another consequence of the Prime Minister's order was that, in the later stages of the war, the Central Bureau of Statistics systematically inflated municipal population estimates so that a larger number of ration control cards were made available than needed by the population legally present (Nobel 1998).

10 Aly and Roth (1984: 34) indicate that Mussolini claimed to have translated the work into Italian "with his own hands."

11 Between 1934 and 1939, Korherr wrote 11 brief notes on books published and

five longer articles in *Allgemeines Statistisches Archiv*. The notes in volume 25, no. 2 were signed in Munich and the notes and article in volume 25, no. 3 gave his new title in Würzburg. Incidentally, the latter article, a report on the population conference held in Berlin in 1935, indicated that "Methorst . . . spoke about population registration" (Korherr 1936b).

12 I served as director of the United Nations Statistical Office (1986–94) and as chief of its Demographic and Social Statistics Branch (1974–86). In 1996 I was a consultant to the International Criminal Tribunal for Rwanda.

13 For example, see notes 4, 5, and 6 for misunderstandings arising from unfamiliarity with the field of population statistics. In addition, Presser (1969) frequently used the term "census" where the concept or word "registration" was meant. To facilitate understanding, I simply substituted "registration" for "census" whenever the latter term was mistakenly used.

14 The issue has been raised internally in Germany, but not by statisticians or demographers. For example, the short monograph by Aly and Roth (1984), which appeared after the postponement of the 1983 German census, was written by political scientists. Although presenting a perspective hostile to the population census, it does recount in detail the misuse of population statistics and methods under the Nazis. Until

relatively recently (see, for example, Friedländer 1997 and Luebke and Milton 1994), this study has been largely ignored.

15 This omission by van Bochove should not be interpreted as indicating his indifference to issues related to human rights or data protection. In his current work in Statistics Netherlands, van Bochove has frequently consulted with the Dutch national office of data protection (Nobel 1998). His paper was cited as one example among many where the advantages of population registration systems are stressed without any discussion of needed safeguards against potential abuse. The unconditional optimism of Methorst and Thomas, expressed in the 1930s, about the promise of "cradle to grave" registration can be excused as naïveté. On the other hand, today, given the abuses that have occurred, the era of unqualified optimism should be over.

16 For example, according to Methorst and Lentz (1935: 42), at that time in addition to being Director-General of Statistics, H. W. Methorst was "Head of the Government Inspection of the Population Registers," a position that Lentz later held. Even after Lentz assumed responsibility for the system, Methorst wrote ". . . it was decided in 1938 by the Netherlands Government, on the suggestion of the Central Statistical Bureau, to introduce this system in all communes before the [planned, but never-taken] census of population in 1940" (Methorst 1938: 713–714).

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