

2 DECEMBER 1921 · 16 NOVEMBER 2004

PROCEEDINGS OF THE AMERICAN PHILOSOPHICAL SOCIETY

VOL. 163, NO. 2, JUNE 2019

tis Dudley Duncan died at the age of 82 on November 16, 2004. It is our view, and we expect that it is also the view of all others who are able to judge quantitative sociology, that Otis Dudley Duncan was the most important quantitative sociologist in the world in the latter half of the 20th century.

One of Dudley's special characteristics was the breadth of his interests: scholarly as well as non-scholarly interests, sociological as well as non-sociological interests, scientific as well as non-scientific interests; and other kinds of interests, as well: classical and contemporary music, electronic music, musicology, poetry, and graphic design. Another of his special characteristics was the fact that he knew when to wrap up his work in one area of study and turn to another-a characteristic that his many successful students did not always share. In rough chronological order, several of the main themes of his work covered the following areas of study: demography and human ecology, social stratification, the social psychology of social mobility, social indicators, statistical methods and models, quantitative reasoning in sociology and demography and social science more generally, measurement and scientific method, and the sociological analysis of music. A complete bibliography of Duncan's published work is appended, as prepared by Professor Mustafa Emirbayer of the University of Wisconsin-Madison.

We mention several highlights of Otis Dudley Duncan's scientific contributions. Throughout his career, Duncan took interest in a subject, studied it exhaustively, developed new concepts and methods appropriate to it, and, then, after making a major contribution, took on another topic. Two constancies in his work were a focus on populations and an avoidance of typological thinking. Ultimately, he recognized that the fundamental problem vexing sociological inquiry was population heterogeneity. In opening up new areas of inquiry and tools appropriate to them, Duncan was often followed by others who hoped to extend and improve upon his methods and findings. But he never looked back, except with a fresh perspective.

Defining Demography

One early indication of Duncan's concern with populations was his collaborative editorial work, with Philip M. Hauser, on *The Study of Population*, a classic volume that not only covered every aspect of the field as then understood, but also introduced what has become the standard definition of demography: "Demography is the study of the size, territorial distribution, and composition of population, changes therein, and the components of such changes, which may be identified

as natality, mortality, territorial movement (migration), and social mobility (change of status)" (Hauser and Duncan 1959, 2).

THE WARNER SCHOOL OF SOCIAL STRATIFICATION

In collaboration with Harold Pfautz, a fellow graduate student at the University of Chicago, Duncan wrote a devastating critique of the then-popular works on social stratification of the anthropologist, W. Lloyd Warner (Pfautz and Duncan 1950). Pfautz and Duncan leveled three major arguments against the validity of the work of Warner and his associates. One was that Warner, a social anthropologist, had failed to consider the differences between the small towns that he studied (e.g., "Jonesville") and the larger and largely urban society that America had become-or to acknowledge others' work on social stratification and inequality in that society. A second was that Warner's work was ideological in character by espousing maintenance of and accommodation to existing stratification regimes. The third, two-part criticism was methodological. Warner's methods relied on a scheme called evaluated participation (EP) to determine the class positions of individuals in a community. In the words of Pfautz and Duncan, "It involves the content analysis of 'indirect interviews' to 'discover' the social class system, as well as to get at the 'social participation' and 'status reputation' of community members to whom references are made in the body of the interviews. Data from this source are summarized on 'status personality cards' and form the basis for an 'estimate of class position'" (1950, 206–207). However, Warner provides no evidence of the validity of this measure-which self-evidently could not be used in a large, urban community—nor enough documentation to permit other researchers to reproduce it. Also, Pfautz and Duncan noted the absence of any explicit sampling scheme behind the choice of community informants and a substantial bias toward higher status individuals among participants.

URBAN RESIDENTIAL SEGREGATION

In the mid-1950s, and in collaboration with Beverly Duncan, Otis Dudley Duncan carried out a series of studies of urban residential segregation. Following an analysis of the properties of various segregation indexes, the Duncans based their research on a simple measure, the index of dissimilarity, the percentage of one population that would have to be redistributed over areal units to match the distribution of a second population (Duncan and Duncan 1955a). Following their work on urban occupational segregation (Duncan and Duncan 1955b), the

Duncans used that index in a study of residential racial segregation in Chicago (Duncan and Duncan 1957), which was later taken national by Karl and Alma Taeuber (Taeuber and Taeuber 1965). Any number of critiques of the index of dissimilarity, alternative proposals, and published comments and replies have followed the work of the Duncans and Taeubers. Excepting a brief and devastating critique of Cowgill's segregation index (Cowgill 1962; Duncan and Duncan 1963), the Duncans did not enter these later controversies, but they disliked the idea of calling the index of dissimilarity "the Duncan Index." They later explored related methods for the analysis of location within cities (Duncan and Duncan 1960).

A Socioeconomic Index for All Occupations

A collaboration with Albert J. Reiss led to the development of a socioeconomic index for all occupations that consisted of a regression-weighted combination of men's occupation-specific educational attainment and income (Duncan 1961). Up to that time, there was no standard quantitative measure of social standing for all occupations. The back story of that development was that, shortly after the end of World War II, the federal government was interested in learning about public perceptions of nuclear physicists—whose work, of course, had played a major part in ending the war through the development of the atomic bomb. To that end, the National Science Foundation supported a social survey, carried out by the relatively new National Opinion Research Center (NORC) at the University of Chicago. The survey asked respondents to rate the social standing (prestige) of close to 100 occupational titles, including those of policy interest. The original director of the NORC study had died, and the task of reporting the findings fell to Albert J. Reiss (1961).

Duncan obtained an additional grant from the National Science Foundation to develop a measure of social standing for all occupations that might be used in analyses of differential mortality. To create that measure, he regressed average prestige ratings obtained in the NORC survey on the aggregated, age-adjusted educational attainment and income of men in the U.S. Census of 1950. He then applied the estimated weights to the characteristics of each occupation listed in the Census, thus creating a quantitative index of the socioeconomic status of occupations. There has been little or no use of the SEI in mortality analysis, but it became a standard metric for research on social mobility—including that later undertaken by Duncan. Moreover, the NORC prestige study has been repeated—covering all occupations—in subsequent decades (Siegel 1971; Nakao and Treas 1994; Smith and Son 2014), and that has in turn led to numerous revisions of the Duncan index (Featherman and Stevens 1982; Nakao and Treas 1994, 1992; Hauser and Warren 1997; Hout, Smith, and Marsden 2015).

Two notable methodological errors are frequently associated with the Duncan index and its successors. The first is to treat it as an index of occupational prestige per se, rather than of the socioeconomic status of occupations. While Duncan used occupational prestige as the criterion in constructing the index, occupational prestige and the SEI are only moderately correlated, and the two measures have quite different correlates (Featherman, Jones, and Hauser 1975; Hauser and Warren 1997). The second error, based on the correct observation that aggregate occupational education and occupational income compose the SEI, is to treat the SEI as if it adequately reflected both the education and income of individuals or households. Measures of the socioeconomic status of occupations are best used in combination with other measures of social and economic status.

The 1962 Occupational Changes in a Generation Study

In a follow-up to the March 1962 Current Population Survey (CPS), the monthly labor force survey conducted by the U.S. Bureau of the Census (2002), Peter Blau and Otis Dudley Duncan attached a brief questionnaire about men's social background, educational attainment, and early occupational careers. When combined with contemporary reports from the CPS, the data comprised the first, large-scale survey of intergenerational social mobility in the United States. The Occupational Changes in a Generation (OCG) study inspired a large cohort of similar studies across the globe, e.g., Goldthorpe's (1980) study of social mobility in Great Britain, Hout's (1989) study of Ireland, and Featherman and Hauser's 1973 replication of the OCG (Hauser and Featherman 1977; Featherman and Hauser 1978).

Moreover, Blau and Duncan's (1967) monograph also broke new methodological ground. The best-known contribution was their "basic model" of the process of stratification, a simple recursive path model relating father's occupational status and education to son's educational attainment and the statuses of first and current occupations. However, the text also referred to a simple loglinear model of intergenerational occupational mobility—initiating a line of work that Duncan and others pursued for many years. In addition to the Blau-Duncan monograph, Duncan (1966a, 1968b) also contributed highly influential essays on the analysis of social mobility. One key contribution of that work was deconstruction of the notion that one could identify the social origins of contemporary individuals with any earlier population.

PATH ANALYSIS AND STRUCTURAL EQUATION MODELS

Duncan had evidently started thinking about the properties of and potential inferences from correlations at least from the early 1960s. In 1963, he published a critique of a fatally flawed analysis of deductions from axiomatic theory (Duncan 1963). In a propositional theory of urbanization, Schwirian and Prehn (1962) had erroneously claimed that, if A and B were positively correlated and B and C were positively correlated, then A and C must also be positively correlated. In his critique, beyond citing several scholarly errors in their work, Duncan noted a basic statistical fact—that the correlations A-B and B-C would have to be quite large to justify an inference even about the sign of the A-C correlation. Costner and Leik (1964) later noted the "plaintive" tone of Prehn and Schwirian's (1963) reply to Duncan.

More important, Duncan's joint paper with Robert W. Hodge (Duncan and Hodge 1963), based on data from the 1951 six-city study of labor mobility, was the first to offer a simple path model of intergenerational occupational stratification. The elaboration of that model at the national level by Blau and Duncan (1967) was preceded by Duncan's (1966b) highly influential introduction to path analysis through sociological examples. In a pioneering effort to combine correlational data from multiple sources, Duncan and colleagues endeavored to enhance the Blau-Duncan path model by introducing psychological variables (Duncan 1968a; Duncan, Haller, and Portes 1968; Duncan and Featherman 1972; Duncan, Featherman, and Duncan 1972; Featherman and Haller 2007). Socioeconomic Background and Achievement (Duncan, Featherman, and Duncan 1972) was published at about the same time as a similar, but far more visible work by Christopher S. Jencks and associates (Jencks et al. 1972).

Partly because of a collaboration between the eminent econometrician, Arthur S. Goldberger, and one of Duncan's students (Hauser and Goldberger 1971), Duncan and Goldberger began a correspondence about the differing approaches to identification and estimation of structural equation models in sociology and economics, and it led to their influential jointly edited volume, *Structural Equation Models in the Social Sciences* (Goldberger and Duncan 1973). Goldberger (1972) followed up with high praise for Sewell Wright's development of path analysis and a critical review of psychometrics (Goldberger 1971), while Duncan (1970) turned his attention to additional features of path analysis in relation to other well-known statistical models and to a series of papers and a short text that addressed prior claims that one or another statistical model might provide unequivocal evidence of causality in observational data (Duncan 1969a, 1969b, 1972, 1975a).

Sociology as a Population Science

Using path analysis, the Blau-Duncan model treated socioeconomic status as a truly interval variable, like weight or distance in physics. Duncan was never comfortable with this simplification. He would have preferred more conservative approaches, treating social status initially as a nominal or at most ordinal variable and then using empirical evidence to validate assumptions about its interval-scale properties. This concern later led him to adopt loglinear models to study intergenerational mobility.

To understand social measurement better, Duncan took time off from research on social stratification and substantive sociological issues and studied social measurement in depth. The product was his 1984 book, *Notes on Social Measurement: Historical and Critical* (Duncan 1984), which he considered his "best book" (Xie 2007, 144). The book not only reflected his thinking about social measurement, but more importantly his fundamental belief that social science cannot, and should not, be as exact as physics. In a classic Duncan-style statement, he said: "But sociology is not like physics. Nothing but physics is like physics, because any understanding of the world that is like the physicist's understanding becomes part of physics . . ." (Duncan 1984, 169).

The reason for Duncan's rejection of physics as the ideal model for sociology was his realization that sociology was a "population science." By population science, he quoted Neyman: "Beginning with the nineteenth century, and increasing in the twentieth, science brought about 'pluralistic' subjects of study, categories of entities satisfying certain definitions but varying in their individual properties. Technically such categories are called 'populations'" (Duncan 1984, 96).

"Population thinking" is a different approach to studying nature from the "typological thinking" prevalent in physical science. Influenced by Plato's obsession with universal and unchanging criteria for scientific truths, typological thinking in physical science dictates that scientific concepts and regularities be essentially homogeneous, across time, space, and units of analysis. Starting with Darwin, population thinking relaxes the homogeneity assumption and pays close attention to within-category individual differences (Mayr 1982). Francis Galton, Darwin's cousin, introduced population thinking to social science, placing emphasis on individual-level variability and laying the foundation for several social science disciplines, such as anthropology, psychology, statistics, population studies, and later sociology (Hilts 1981). Today, population thinking permeates empirical social science so much that social scientists may not even be aware of its intellectual roots (Lieberson and Lynn 2002; Goldthorpe 2016). In an article in remembrance of Duncan, Xie (2007) provides details portraying Duncan as a population thinker.

Loglinear Models

Based on his acceptance of population thinking, Duncan became uncomfortable with linear regression models that underlay the Blau-Duncan path analytical model of intergenerational mobility. He was ready to concede that the path analytical model was not applicable for sociological studies (Xie 2007). Indeed, Duncan (1975a) did not use a single social science example in his book on path analysis. In addition, Duncan did not want to take credit for rediscovering path analysis for social science (Xie 2007). For an alternative statistical approach, he soon turned to loglinear models.

Before turning to loglinear models of social mobility, Dudley Duncan (1975b), alone and with Beverly Duncan and J. A. McRae (Duncan, Duncan, and McRae 1978), experimented with other new methods for the analysis of cross-classified data, focusing especially on the ways in which cross-classification tables could be partitioned or collapsed to inform analyses of data from social surveys. Later developments were presaged in papers that showed how to impose linear constraints in analyses of multiway contingency tables (Duncan 1979a; Duncan and McRae 1979).

Loglinear models of social mobility were appealing to Duncan because they begin with simple, descriptive cross-classified tables, typically with father's occupation as rows and son's occupation as columns. Occupational categories are aggregations of similar occupations with roughly the same social status. Loglinear models developed by Leo Goodman and others allowed researchers to partial out overall changes in occupational structures to estimate the net association between father's occupation and son's occupation (Goodman 2007). What was more important to Duncan was that researchers did not need to impose either ordinal or internal assumptions about the relative status of the occupations but could use loglinear models to estimate social distances across occupations (Duncan 1979b). As a researcher who valued the primacy of evidence, Duncan found the loglinear approach to be preferable to the path-analytical approach that presumed an interval scale of social status such as the SEI score.

Together with Leo Goodman's (1979a, 1979b) elegant papers on ordinal models for categorical data and Duncan's joint paper with Michael E. Sobel and Michael Hout (Sobel, Duncan, and Hout 1985), Duncan's 1979 paper initiated a virtual revolution in the analysis of social mobility tables (Erikson and Goldthorpe 1992; Goodman and Hout 1998a, 1998b, 2001; Xie 1992, 1998; Yamaguchi 1987, 1998). Hout's (1984) SAT model exemplified this approach by using continuous and categorical measures of occupations to analyze intergenerational social mobility. Clogg (1982) further extended loglinear models as a general method for scaling ordinal variables, such as those with the Likert scale widely used for attitude data.

RASCH MODELS

Toward the end of his career, Duncan became a firmer and firmer believer in population thinking. Recall that loglinear models of mobility deal with data that are highly aggregated into broad occupational categories. Implicitly, all persons falling into particular cells of such cross-classifications are interchangeable, i.e., assumed to be homogenous. Duncan became increasingly skeptical of statistical approaches that assume homogeneity or overlook individual-level heterogeneity. In a 1996 letter, he explicated his disappointment with prevailing practices of social statistics:

In the little thinking I do these days about the old battles I fought, it has increasingly seemed to me that one of two or three cardinal problems that social science has not yet come to grips with is precisely this issue of heterogeneity . . . The ubiquity of heterogeneity means that for the most part we substitute actuarial probabilities for the true individual probabilities, and therefore we generate mainly descriptively accurate but theoretically empty and prognostically useless statistics. (Quoted in Xie 2007, 154)

Not only was Duncan bothered by the issue of population heterogeneity, but he also attempted to address it toward the end of his life. For this, he gave up loglinear models and found his methodological satisfaction in the Rasch model (Xie 2007).

Georg Rasch (1901–1980) was a Danish mathematician and statistician who formulated a measurement model that allowed for population heterogeneity (Rasch 1966, 1960). Essentially, Rasch decomposed the probability of a subject's scoring on an item, after a logit transformation, into an additive component due to the item's difficulty and another component due to the subject's score. For notation, let *pij* be the probability that the *i*th subject will give a positive response to the *j*th item. The Rasch model specifies the following logit model:

$$\log[\operatorname{pij}/(1 - \operatorname{pij})] = \theta \mathbf{i} + \beta \mathbf{j}, \tag{1}$$

where θ i is the person-specific parameter, and β j is the item-specific parameter. As shown in equation (1), an important property of the Rasch model is that it allows for individual-variability (i.e., additive population heterogeneity) and item-variability, but it imposed separability between them through additivity, i.e., the invariance properties: θ i does not vary with item (j), and β j does not vary with subject (i). Potentially at least, the Rasch model thus allows the researcher to treat all different subjects as constituting unique "classes" themselves, thus avoiding the seemingly arbitrary procedure of classifying subjects, based on response patterns, into latent classes in the traditional latent class models.

Duncan spent about 10 years working with the Rasch model and published several papers based on it (Duncan 1983, 1985; Duncan and Stenbeck 1987, 1988; Hout, Duncan, and Sobel 1987; Duncan, Stenbeck, and Brody 1988). However, he never finished the work and left much of his thinking on the subject unpublished. Even after his retirement, he encouraged his students and colleagues to work on it (Xie 2007). Of course, the Rasch model was later developed to be the standard tool in psychometric testing, now under the rubric of item-response theory (De Ayala 2008). The basic idea was later found useful in multi-level models (Raudenbush and Bryk 1986, 2002) and latent class models (D'unger et al. 1998). However, to this day, statistical modeling of population heterogeneity has not become a standard practice, being limited to a handful of methodologists and applied social scientists so that further development in this direction is still needed (Goldthorpe 2016).

Duncan received many important honors and awards. He was elected as a member of each of the three main learned societies (national academies) in the United States: the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. He received three honorary degrees: the Honorary Degree, Doctor of Humane Letters, from the University of Chicago; the Honorary Degree, Doctor of Humane Letters, from the University of Wisconsin–Madison; and the Honorary Degree, Doctor of Science, from the University of Arizona. He was elected President of the Population Association of America. He was a co-recipient of the Sorokin Award, from the American Sociological Association; a recipient of the Samuel A. Stouffer Award, from the American Sociological Association; and a recipient of the Irene G. Taeuber Award, from the Population Association of America. He was a recipient of the Common Wealth Award of Distinguished Service in the Field of Sociology. He was elected a Fellow of the American Statistical Association; and he served as the Chair of the Social Statistics Section, of the American Statistical Association. He was appointed the Charles Horton Cooley University Professor of Sociology at the University of Michigan.

Here are some comments by Duncan on the achievements of "great men," and also some comments by him on an important early intellectual influence: "From boyhood ... I have had a tendency to idolize fine scientists as 'great men,' though I hope not in an uncritical way. It is just that there are orders of achievement that I feel that I can never hope to comprehend, but [that I can] at best . . . appreciate." When considering people with whom he had had significant contact, Duncan also noted that he regarded W. F. Ogburn as "something of an approximation" to a "great man," and he considered Sewell Wright a "great man." Wright was one of the three major founders of modern population genetics; his invention of path analysis was just one of his many contributions to that field. Ogburn was described, at the time of his death in 1959, as "the last great social scientist who wished to know it all." His tireless advocacy of measurement, his writings on social change and culture, and his insistence on the verification of social theories using quantitative methods helped to move the emphasis in sociology at that time toward the development of a more exact science of social phenomena. Duncan wrote his Ph.D. thesis under Ogburn at the University of Chicago, and he wrote about Ogburn's work in "An Appreciation of William Fielding Ogburn" (Duncan 1959). Ogburn was, in many ways, a role model for Dudley. Here is Dudley's comment on this matter: "Had I been closer to [Ogburn] in a personal sense, I might have become his disciple; as it was, I was his student and am no one's disciple."

In 1974, Duncan and one of the authors of this biographical memoir, Leo A. Goodman (LAG), were informed by the American Sociological Association (ASA) that Dudley and LAG were selected to share the Samuel A. Stouffer Methodology Award. When LAG heard this news, he felt pleased and honored and he especially liked the idea that Dudley and LAG would share the award. Dudley had a quite different reaction to this news. He wrote an open letter, in which he wrote, "It would be a great honor to share the award with Leo Goodman, but . . . I feel strongly that Goodman should be the sole

recipient of this year's award, and that his honor should not be diluted. ... It is characteristic of Goodman's ... work, then, that it solves problems ... Moreover, it solves problems that are important ... Finally, it solves problems in a definitive ... way ... The solutions actually supersede and do not merely compete with previous procedures, recipes, and rules of thumb In our opinion, Dudley's response to the shared award understated the value of his own methodological contributions.

Sometime in the mid-1980s, Dudley Duncan sent LAG a humorous overview of his own work and impact. This document refers to Paul Lazarsfeld and Columbia University, where Lazarsfeld was a famous professor, and to Georg Rasch, the Danish mathematician and psychometrician. It also refers to Dudley Duncan and to Leo Goodman. Dudley did not say who wrote this document, but he was the only person who could have written it. So here now is this overview, as presented by the "Prophet Dudley":

For lo these many years the People were dwelling in the Land of Columbia with their wives and camels and computers. But the zero order correlations came upon them and the People were sore afraid. So they spoke unto the Prophet Paul saying "Canst thou relieve us of this plague of zero order correlations?" And the Prophet Paul told them to buildeth tables of percentages and the correlations would go away. And the People did as he said and they builded many tables (and verily some obtained chairs) and some of the correlations went away. And the People of Columbia waxed fat and had many wives and many concubines.

And it came to pass that the Prophet Dudley arriveth from the sands of Oklahoma. And the Prophet Dudley spake unto the People saying, "Repent, ye sinners! Thou worshipeth false Gods!" And he told the People they should follow him down the recursive path, nigh unto the Land of Econometrics, whence he had been before them. And the People packed up their wives and camels and computers and followed him (as best they could) and the assistant professors found that many books could be written elucidating the miracle that Education is correlated with Occupational Prestige (when Prestige is estimated from Education) and the assistant professors became full professors, and the residual variance waxed while the man and maidservants decomposed covariances, and the journals were filled with graven images of what appeared to be real maps of Bulgaria. But the People cried out, "We know not what this Sociology is and cannot read our journals nor yet find out any information about Society." But the Prophet and his disciples said, "Oh, ye of little faith, trust us." So the People stopped reading the

journals and devoted themselves to Marxist agitation and all was well in the Land. But the remnant who tarried in Columbia were punished and the Lord smote the Bureau of Applied Social Research to show he/she was not kidding.

And it came to pass that the Prophet Leo came down from the clouds and saith, "Moses gave you tablets of clay, but I giveth unto you Tables of Counts plus plenteous notation." And the Prophet Dudley was moved, and he spoke unto the People saving "Repent, ve sinners! Thou worshipeth false Gods!" and "Abandon ve those comfortable interval scales and follow me on the road back to tables." And the People despaired and they cried out, "Hey, we just came from there and it was a long walk." But the Prophet Dudley said, "Ye speaketh of tables builded from percentages; I speaketh unto you of tables builded from Logs, as told to me by the Wizard of Odds." And the People said, "Oh, I see, I guess," and they packed up their wives and camels and computers and followed him (as best they could) back to the Land of Tables. And somewhat fewer of the assistant professors became full professors because it was a time of drought, and many fewer of the People could read the journals nor yet find out information about Society. But the Prophet and his disciples said, "Trust us, we were wrong about those covariances but we got it right this time." And those that dwelt in the Land of Sociology were known as odd fellows and all was well.

And it came to pass that the Lord spaketh unto the Prophet Rasch and the Prophet Rasch spaketh unto the Prophet Dudley of local independence and the Prophet Dudley was moved. And he spake unto the People saying, "Repent ye sinners! Thou worshipeth false Gods!" And he saith unto them, "Abandon ye not only regression but also causality and controls. Bow ye down before the mighty, invisible, unseen variable!" And the People saith, "I don't see any invisible variables out there, but anything to get away from those damn logarithms," and the wives and camels creaked to their feet and said, "Upsy daisy, here we go again."

In the above document, the writer notes that the Prophet Dudley arriveth from the sands of Oklahoma. Here is more information pertaining to the Prophet's background in the sands of Oklahoma:

Dudley's parents were both members of large farm families in northeast Texas. Although their levels of living were low and their upbringing arduous, their aspirations were high. They met in college during World War I, and when Dudley was born he was a member of the "baby boom" that flared up briefly after the war. Dudley was born in Nocona, Montague County, Texas, close to the Texas border with Oklahoma, on December 2, 1921. Dudley's father worked as a public school teacher, then as a principal, and then as a superintendent in order to earn his livelihood while trying to pursue graduate studies; finally, after pursuing his graduate studies for many years, he received his Ph.D. in 1941. In 1929, before Dudley's father, Otis Durant Duncan. actually received his Ph.D., he was invited to join the faculty of Oklahoma A&M College (later called Oklahoma State University) in Stillwater, Oklahoma as a rural sociologist; in 1936, he was asked to form and head a Department of Sociology there, and he remained its head until his retirement. So, until Dudley was 8 years old, he was "on the road" with his parents, as his father moved from job to job while trying to pursue his graduate studies. And for the next 11 years, he grew up in a quiet college town in Oklahoma, more or less out on the cultural frontier of America. (Oklahoma was the 46th state admitted into the Union; it was admitted in 1907.) In 1938, Dudley entered college at Oklahoma A&M College and shortly thereafter resolved to major in sociology.

In addition to his father, another leading sociologist, William Hamilton Sewell—also a member of the APS, NAS, and AAAS—was a formative influence in Dudley's early life, college education, and career. The elder Duncan had met Sewell when both were graduate students at the University of Minnesota. He brought Sewell to Stillwater as an Assistant Professor at the Agricultural Experiment Station, where Sewell (1940) carried out one of the first sociological applications of factor analysis.

The Duncans and Sewells were next-door neighbors, and in a brief autobiographical statement, Dudley wrote about Sewell:

In 1937 he was a fledgling member of my father's department, a close friend of the family, the proud possessor of a beautiful and charming wife, Elizabeth, and soon to be the parent of three attractive children. I mowed the lawn and did heavy chores for Liz, baby-sat with the children, and from time to time got tidbits of wisdom from Bill. In the summer of 1939, I took my first two courses in sociology, one from Sewell. His teaching was orderly and informative but not, as such, inspiring to me. What was exceedingly stimulating was that he referred me to the current polemical literature in sociology, which revolved a good deal around the question of whether and how the discipline could be made into a science-the answer of George A. Lundberg, in Foundations of Sociology, being that we must seek rigor and reliability of observation, perfect our instruments of measurement, and attack the testing of hypotheses with research designs that had proved robust and productive in the natural sciences.

In later years, their relationship was in some ways reversed, for Dudley inspired and influenced the social stratification research of Sewell and his colleagues (Sewell et al. 2004), among whom—by no accident—was a student of Dudley Duncan and one of the authors of this memoir, Robert M. Hauser (RMH).

Before earning his doctorate at the University of Chicago in 1949, Dudley earned a B.A. at Louisiana State University in 1941—having transferred there from Oklahoma A&M for his senior year—and an M.A. at the University of Minnesota in 1942. He then served as a clinical psychologist in the U.S. Army, which perhaps accounted for a pronounced distaste for psychological explanations early in his sociological career. One interesting consequence of Dudley's brief career in clinical psychology was his unmasking—through a letter to the editor of *The New Republic*—a racist effort to exclude Jews from that developing field (Harris 2009). As an academic, Dudley served in Departments of Sociology at the Pennsylvania State University, the University of Wisconsin–Madison, the University of Chicago, the University of Michigan, the University of Arizona, and the University of California, Santa Barbara.

We noted near the beginning of this biographical memoir that the breadth of Dudley's interests was very wide. Here we take note of some of his other interests.

Poetry

None of us knows quite when Dudley began to write poetry, or whether any of his poems have been preserved or published. On one occasion, while Dudley was at the University of Arizona, he visited the University of Wisconsin–Madison to present a research seminar. Rather than beginning his talk on that topic, he amazed the assembled faculty and students with an elegant and wrenching poem about the violation he had felt after his home was burglarized.

It turned out that Dudley happened to know that one of us (LAG) had been very good friends with the famous poet-couple, Sylvia Plath (who committed suicide quite some time ago) and Ted Hughes (who died a few years ago), whom LAG had first gotten to know when he was a visiting professor at Clare College, in Cambridge, England, during the academic year 1959–1960. So, Dudley sent LAG a very good poem about Sylvia, "Cottage Street, 1953," written by the poet Richard Wilbur. When Ted Hughes, Sylvia's husband, read this poem about Sylvia, Ted wrote that the poem is "the single truest best thing" written about his wife.

Music

Although not inclined, as an adult, to perform in front of others, Dudley was a passable violinist and had also played another instrument, the bassoon. Dudley was very interested in Just Intonation, a theory of tuning based on pure intervals. He published several articles on this topic. Dudley composed many pieces of music with a computer and electronic instruments based on the Just Intonation theory of tuning. He created a body of work amounting to an archive of some 20 CDs.

Computer Graphics

Dudley was also very interested in computer graphics. He created hundreds of abstract images and designs, of which many were intended to represent concepts in musical theory.

Other Interests

Late in life, Dudley wrote articles on, for example, the prevalence of creationism, the rising public toleration of atheists, the increasing number who specify "none" as their religion, the increasing public approval of euthanasia and assisted suicide for terminally ill persons experiencing great pain, and also on his assessment of some controversial statistics regarding gun use.

Conclusion

Otis Dudley Duncan was truly a polymath, gifted in poetry, music, and design, as well as sociological theory and statistical models and methods. In this memoir, we have mainly traced the evolution of his contributions to sociology and to social science methodology. One key character that emerges from our review of his contributions is that Duncan was highly critical, not only of others' works but, more importantly, his own work. He was never satisfied with a given solution to a methodological problem in social science, however good it may have seemed to others at the time. After he studied and developed a methodological tool, he quickly realized its limitations and moved on to better approaches. While his contributions shifted seamlessly from one area to the next across his scientific career, each of them has informed and motivated others to study, analyze, and extend his work. That is the lasting legacy of Otis Dudley Duncan.

At the beginning of this memoir, we noted that Dudley Duncan died at the age of 82 in 2004. He died after struggling, for two years, with advanced prostate cancer. During this last period in his life, he was also plagued by various other medical problems, and he experienced great pain at times. Nevertheless, in the months preceding his death, Dudley repeatedly proclaimed as his motto the stage direction, "Exit, laughing." And he did what he could to adhere to that principle.

Elected 1973

Leo A. Goodman

Class of 1938 Professor, Emeritus Department of Sociology, University of California, Berkeley

ROBERT M. HAUSER

Executive Officer American Philosophical Society

Yu Xie

Bert G. Kerstetter '66 University Professor of Sociology Princeton University

References

- Blau, P. M., and O. D. Duncan. 1967. *The American Occupational Structure*. New York: John Wiley and Sons.
- Clogg, C. C. 1982. "Some Models for the Analysis of Association in Multiway Cross-Classifications Having Ordered Categories." *Journal of the American Statistical Association* 77: 803–15.
- Costner H. L., and R. K. Leik. 1964. "Deductions from 'Axiomatic Theory." American Sociological Review 29 (6): 819–35.
- Cowgill, D. O. 1962. "Segregation Scores for Metropolitan Areas." American Sociological Review 27: 400–402.
- De Ayala, R. 2008. "A Commentary on Historical Perspectives on Invariant Measurement: Guttman, Rasch, and Mokken." *Measurement: Interdisciplinary Research and Perspectives* 6: 209–12.
- Duncan, B., and O. D. Duncan. 1960. "The Measurement of Intracity Locational and Residential Patterns." *Journal of Regional Science* 2: 37–54.
- Duncan, B., O. D. Duncan, and J. A. McRae. 1978. Sex Typing and Social Roles: A Research Report. New York: Academic Press.
- Duncan, O. D. 1959. "An Appreciation of William Fielding Ogburn." *Technology and Culture* 1: 94–99.
- ——. 1961. "A Socioeconomic Index for all Occupations." In *Occupations and Social Status*, edited by A. J. Reiss, Jr., 109–38. New York: Free Press.
- . 1963. "Axioms or Correlations." American Sociological Review 28: 452.
- ——. 1966a. "Methodological Issues in the Analysis of Social Mobility." In Social Structure and Mobility in Economic Development, edited by N. J. Smelser and S. M. Lipset, 51–97. Chicago: Aldine Publishing Co.

- -. 1966b. "Path Analysis: Sociological Examples." American Journal of Sociology 72: 1–16. -. 1968a. "Ability and Achievement." Eugenics Quarterly 15: 1-11. -. 1968b. "Social Stratification and Mobility: Problems in the Measurement of Trend." In Indicators of Social Change: Concepts and Measurements, edited by E. B. Sheldon and W. E. Moore, 675–719. New York: Russell Sage Foundation. -. 1969a. "Some Linear Models for Two-Wave, Two-Variable Panel Analysis." Psychological Bulletin 72: 177-82. -. 1969b. "Contingencies in Constructing Causal Models." Sociological Methodology 1: 74-112. -. 1970. "Partials, Partitions, and Paths." Sociological Methodology 2: 38-47. —. 1972. "Unmeasured Variables in Linear Models for Panel Analysis." Sociological Methodology 4: 36-82. -. 1975a. Introduction to Structural Equation Models. New York: Academic Press. -. 1975b. "Partitioning Polytomous Variables in Multiway Contigency Analysis." Social Science Research 4: 167-82. -. 1979a. "Constrained Parameters in a Model for Categorical Data." Sociological Methods and Research 8: 57-68. -. 1979b. "How Destination Depends on Origin in the Occupational Mobility Table." American Journal of Sociology 84: 793-803. -. 1983. "On a Dynamic Response Model of WF Kempf." Social Science Research 12: 393-400. -. 1984. Notes on Social Measurement: Historical and Critical. New York: Russell Sage Foundation. -. 1985. "Some Models of Response Uncertainty for Panel Analysis." Social Science Research 14: 126-41. Duncan, O. D., and B. Duncan. 1955a. "A Methodological Analysis of Segregation Indexes." American Sociological Review 20: 210-17. -. 1955b. "Residential Distribution and Occupational Stratification." American Journal of Sociology 60: 493-503. -. 1957. The Negro Population of Chicago: A Study of Residential Succession. Chicago: University of Chicago Press. -. 1963. "Measuring Segregation." American Sociological Review 28: 133. Duncan, O. D., and D. L. Featherman. 1972. "Psychological and Cultural Factors in the Process of Occupational Achievement." Social Science Research 1: 121-45. Duncan, O. D., D. L. Featherman, and B. Duncan. 1972. Socioeconomic Background and Achievement. New York: Seminar Press. Duncan, O. D., A. O. Haller, and A. Portes. 1968. "Peer Influences on Aspirations: A Reinterpretation." American Journal of Sociology 74: 119-37. Duncan, O. D., and R. Hodge. 1963. "Education and Occupational Mobility: A Regression Analysis." The American Journal of Sociology 68: 629-44.
- Duncan, O. D., and J. A. McRae. 1979. "Multiway Contingency Analysis with a Scaled Response or Factor." Sociological Methodology 10: 68-85. Duncan, O. D., and M. Stenbeck. 1987. "Are Likert Scales Unidimensional?" Social
- Science Research 16: 245-59.
- . 1988. "Panels and Cohorts: Design and Model in the Study of Voting Turnout." Sociological Methodology 18: 1–35. Duncan, O. D., M. Stenbeck, and C. J. Brody. 1988. "Discovering Heterogeneity: Con-
- tinuous versus Discrete Latent Variables." American Journal of Sociology 93: 1305-21.
- D'unger, A. V., K. C. Land, P. L. McCall, and D. S. Nagin. 1998. "How Many Latent Classes of Delinquent/Criminal Careers? Results from Mixed Poisson Regression Analyses." American Journal of Sociology 103: 1593–1630.
- Erikson, R., and J. H. Goldthorpe. 1992. The Constant Flux: A Study of Class Mobility in Industrial Societies. Oxford: The Clarendon Press.

- Featherman, D. L., and A. O. Haller. 2007. "The Social Psychological Legacy of Otis Dudley Duncan." Research in Social Stratification and Mobility 25: 119–27.
- Featherman, D. L., and R. M. Hauser. 1978. *Opportunity and Change*. New York: Academic Press.
- Featherman, D. L., F. L. Jones, and R. M. Hauser. 1975. "Assumptions of Social Mobility Research in the U.S.: The Case of Occupational Status." *Social Science Research* 4: 329–60.
- Featherman, D. L., and G. Stevens. 1982. "A Revised Socioeconomic Index of Occupational Status: Application in Analysis of Sex Differences in Attainment." In *Measures of Socioeconomic Status: Current Issues*, edited by M. Powers, 93–129. Boulder, CO: Westview Press.
- Goldberger, A. S. 1971. "Econometrics and Psychometrics: A Survey of Communalities." Psychometrika 36: 83–107.

—. 1972. "Structural Equation Methods in the Social Sciences." *Econometrica: Journal of the Econometric Society* 40: 979–1001.

- Goldberger, A. S., and O. D. Duncan. 1973. *Structural Equation Models in the Social Sciences*. New York: Seminar Press.
- Goldthorpe, J. H. 1980. Social Mobility and Class Structure in Modern Britain. Oxford: Clarendon Press.
 - —. 2016. Sociology as a Population Science. Cambridge: Cambridge University Press.
- Goodman, L. A. 1979a. "Multiplicative Models for the Analysis of Occupational Mobility Tables and Other Kinds of Cross-Classification Tables." *American Journal of Sociology* 84: 804–19.
 - —. 1979b. "Simple Models for the Analysis of Association in Cross-Classifications Having Ordered Categories." *Journal of the American Statistical Association* 74: 537–52.
 - 2007. "Statistical Magic and/or Statistical Serendipity: An Age of Progress in the Analysis of Categorical Data." *Annual Review of Sociology* 33: 1–19.
- Goodman, L. A, and M. Hout. 1998a. "Rejoinder: Understanding the Goodman-Hout Approach to the Analysis of Differences in Association and Some Related Comments." Sociological Methodology 28: 249–61.
 - —. 1998b. "Statistical Methods and Graphical Displays for Analyzing How the Association between Two Qualititative Variables Differs among Nations, among Groups, or Over Time." In *Sociological Methodology 1998*, edited by M. T. Sobel and M. Becker, 175–230. Cambridge: Blackwell.
 - 2001. "Statistical Methods and Graphical Displays for Analyzing How the Association between Two Qualitative Variables Differs among Countries, among Groups, or Over Time: Part II: Some Exploratory Techniques, Simple Models, and Simple Examples." *Sociological Methodology* 31: 189–221.
- Harris, B. 2009. "Jewish Quotas in Clinical Psychology?: The Journal of Clinical Psychology and the Scandal of 1945." Review of General Psychology 13: 252-61.
- Hauser, P. M., and O. D. Duncan. 1959. The Study of Population: An Inventory and Appraisal. Chicago: University of Chicago Press.
- Hauser, R. M., and D. L. Featherman. 1977. *The Process of Stratification: Trends and Analyses*. New York: Academic Press.
- Hauser R. M., and A. S. Goldberger. 1971. "The Treatment of Unobservable Variables in Path Analysis." In *Sociological Methodology* 1971, edited by H. L. Costner, 81–117. San Francisco: Jossey-Bass.
- Hauser R. M., and J. R. Warren. 1997. "Socioeconomic Indexes for Occupations: A Review, Update, and Critique." In Sociological Methodology 1997, edited by A. E. Raftery, 177–298. Cambridge: Basil Blackwell.
- Hilts, V. L. 1981. Statist and Statistician. New York: Arno Press.
- Hout, M. 1984. "Status, Autonomy, and Training in Occupational Mobility." American Journal of Sociology 89: 1379–409.

—. 1989. Following in Father's Footsteps: Social Mobility in Ireland. Cambridge: Harvard University Press.

- Hout, M., O. D. Duncan, and M. E. Sobel. 1987. "Association and Heterogeneity: Structural Models of Similarities and Differences." Sociological Methodology 17: 145–84.
- Hout, M., T. W. Smith, and P. V. Marsden. 2015. "Prestige and Socioeconomic Scores for the 2010 Census Codes." *Methodological Report*. Chicago: National Opinion Research Center.
- Jencks, C., M. Smith, H. Acland, M. J. Bane, D. Cohen, H. Gintis, B. Heyns, and S. Michelson. 1972. *Inequality: A Reassessment of the Effect of Family and Schooling in America*. New York: Basic Books.
- Lieberson, S., and F. B. Lynn. 2002. "Barking Up the Wrong Branch: Scientific Alternatives to the Current Model of Sociological Science." *Annual Review of Sociology* 28: 1–19.
- Mayr, E. 1982. The Growth of Biological Thought: Diversity, Evolution, and Inheritance. Cambridge: Harvard University Press.
- Nakao, K., and J. Treas. 1992. The 1989 Socioeconomic Index of Occupations: Construction from the 1989 Occupational Prestige Scores. Chicago: National Opinion Research Center.
 - 1994. "Updating Occupational Prestige and Socioeconomic Scores: How the New Measures Measure Up." In *Sociological Methodology 1994*, edited by P. V. Marsden, 1–72. Washington, DC: American Sociological Association.
- Pfautz, H. W., and O. D. Duncan. 1950. "A Critical Evaluation of Warner's Work in Community Stratification." *American Sociological Review* 15: 205–15.
- Prehn, J. W., and K. P. Schwirian. 1963. "Reply to Duncan." American Sociological Review 28: 452-53.
- Rasch, G. 1960. Studies in Mathematical Psychology: I. Probabilistic Models for Some Intelligence and Attainment Tests. Oxford, England: Nielsen & Lydiche.
- ——. 1966. "An Item Analysis which Takes Individual Differences into Account." British Journal of Mathematical Statistical Psychology 19: 49–57.
- Raudenbush, S., and A. S. Bryk. 1986. "A Hierarchical Model for Studying School Effects." Sociology of Education 59 (1): 1–17.
 - ——. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks: Sage Publications.
- Reiss, A. J., Jr. 1961. Occupations and Social Status. New York: Free Press of Glencoe.
- Schwirian, K. P., and J. W. Prehn. 1962. "An Axiomatic Theory of Urbanization." American Sociological Review 27: 812–25.
- Sewell, W. H. 1940. The Construction and Standardization of a Scale for the Measurement of the Socio-economic Status of Olkahoma Farm Families. Stillwater, OK: Oklahoma Agricultural and Mechanical College, Agricultural Experiment Station.
- Sewell, W. H., R. M. Hauser, K. W. Springer, and T. S. Hauser. 2004. "As We Age: The Wisconsin Longitudinal Study, 1957–2001." In *Research in Social Stratification* and Mobility, edited by K. Leicht, 3–111. London: Elsevier.
- Siegel, P. M. 1971. "Prestige in the American Occupational Structure." Ph.D. dissertation. University of Chicago.
- Smith, T. W., and J. Son. 2014. Measuring Occupational Prestige on the 2012 General Social Survey. GSS Methodological Report No. 122. NORC at the University of Chicago.
- Sobel, M. E., O. D. Duncan, and M. Hout. 1985. "Exchange, Structure, and Symmetry in Occupational Mobility." *American Journal of Sociology* 91: 359–72.
- Taeuber, K. E., and A. F. Taeuber. 1965. Negroes in Cities: Residential Segregation and Neighborhood Change. Chicago: Aldine Pub. Co.
- U.S. Bureau of the Census. 2002. "The Current Population Survey: Design and Methodology." *Technical Papers*. Washington, DC: Government Printing Office.
- Xie, Y. 1992. "The Log-Multiplicative Layer Effect Model for Comparing Mobility Tables." *American Sociological Review* 57: 380–95.

—. 1998. "Comment: The Essential Tension between Parsimony and Accuracy." Sociological Methodology 28: 231–36.

—. 2007. "Otis Dudley Duncan's Legacy: The Demographic Approach to Quantitative Reasoning in Social Science." *Research in Social Stratification and Mobility* 25: 141–56.

Yamaguchi, K. 1987. "Models for Comparing Mobility Tables: Toward Parsimony and Substance." *American Sociological Review* 52: 482–94.

—. 1998. "Comment: Some Alternative Ways to Formulate Regression-Type Models for Three-Way Contingency Table Analysis to Enhance the Interpretability of Results." *Sociological Methodology* 28: 237–47.

Otis Dudley Duncan (1921–2004): A Comprehensive Bibliography¹

The 1940*s*

1943	Duncan, Otis Dudley. "Rural-Urban Variations in the Age of Parents at the Birth of the First Child." <i>Rural Sociology</i> 8: 62–67.
1948	Duncan, Otis Dudley. "Regional Comparisons Standardized for Urban- ization." Social Forces 26: 430–33.
1949	Ohlin, Lloyd E., and Otis Dudley Duncan. "The Efficiency of Prediction in Criminology." <i>American Journal of Sociology</i> 54: 441–51.

The 1950s

1950	Duncan, Otis Dudley. "Fertility of the Village Population in Pennsylva-
	nia, 1940." Social Forces 28: 304–309. Based on a Report to the Pennsylvania Agricultural Experiment Station, 1950.
1950	Pfautz, Harold W., and Otis Dudley Duncan. "A Critical Evaluation of Warner's Work in Community Stratification." <i>American Sociological</i> <i>Review</i> 15: 205–15.
1951	Duncan, Otis Dudley. "Optimum Size of Cities." In A Reader in Urban Sociology, edited by Paul K. Hatt and Albert J. Reiss, Jr., 759–72. Glencoe, IL: Free Press.
1951	Duncan, Otis Dudley. "Proper Aphorisms for a Relativist Sociology." Typescript in the papers of E. W. Burgess (box 33, folder 4), Special Collections Division, University of Chicago Library.
1951	Duncan, Otis Dudley, and Jay W. Artis. "Some Problems of Stratification Research." <i>Rural Sociology</i> 16: 17–29.
1951*	Duncan, Otis Dudley, and Jay W. Artis. Social Stratification in a Pennsyl- vania Rural Community. Bulletin 543. State College, PA: Pennsylva- nia Agricultural Experiment Station.
1952	Duncan, Otis Dudley. "Is the Intelligence of the General Population Declining?" American Sociological Review 17: 401-407.
1952	Duncan, Otis Dudley. "Urbanization and Retail Specialization." Social Forces 30: 267–71.

1 Books, research monographs, and edited volumes are indicated by an asterisk (*).

1952	Duncan, Otis Dudley. "Letter to the Editor: Comment on Lorimer State- ment." American Sociological Review 17: 771.
1952	Whitney, Vincent Heath, and Otis Dudley Duncan. "Annual Meeting of the Population Association." <i>Population Index</i> 18: 178–88.
1953	Duncan, Otis Dudley, and Beverly Davis. "An Alternative to Ecological Correlation." American Sociological Review 18: 665–66.
1953	Duncan, Otis Dudley, Lloyd E. Ohlin, Albert J. Reiss, Jr., and Howard R. Stanton. "Formal Devices for Making Selection Decisions." <i>American Journal of Sociology</i> 58: 573–84.
1953	Harold F. Kaufman, Otis Dudley Duncan, Neal Gross, and William H. Sewell. "Problems of Theory and Method in the Study of Social Stratification in Rural Society." <i>Rural Sociology</i> 18: 12–24.
1955	Duncan, Otis Dudley, and Beverly Duncan. "A Methodological Analysis of Segregation Indexes." <i>American Sociological Review</i> 20: 210–17.
1955	Duncan, Otis Dudley, and Richard W. Redick. "Illustrative Projections of College Enrollment in Illinois and the Chicago Standard Metropoli- tan Area, to 1990." <i>Journal of General Education</i> 8: 74–85.
1955	Duncan, Otis Dudley, and Beverly Duncan. "Residential Distribution and Occupational Stratification." <i>American Journal of Sociology</i> 60: 493–503.
1955	Duncan, Otis Dudley. "Letter to the Editor: Reply to Bell's Letter." Amer- ican Journal of Sociology 61: 261–62.
1956	Duncan, Otis Dudley. "Research on Metropolitan Population: Evalua- tion of Data." <i>Journal of the American Statistical Association</i> 51: 591–96.
1956	Duncan, Otis Dudley. "Impact of Urbanization on Family Farms." Farm Policy Forum 9: 16–19.
1956	Duncan, Otis Dudley. "Gradients of Urban Influence on the Rural Population." <i>Midwest Sociologist</i> 18: 27–30.
1956	Duncan, Otis Dudley. "Research on Metropolitan Population: Evalua- tion of Data." <i>Journal of the American Statistical Association</i> 51: 591–96.
1956	Duncan, Otis Dudley. "Note on Farm Tenancy and Urbanization." Jour- nal of Farm Economics 38: 1043-47.
1956*	Duncan, Otis Dudley, and Beverly Duncan. Chicago's Negro Population: Characteristics and Trends. Chicago: Office of the Housing and Redevelopment Coordinator and Chicago Plan Commission.
1956*	Duncan, Otis Dudley, and Joseph J. Spengler, eds. Demographic Analysis: Selected Readings. Glencoe, IL: Free Press.
1956*	Duncan, Otis Dudley, and Joseph J. Spengler, eds. Population Theory and Policy: Selected Readings. Glencoe, IL: Free Press.
1956*	Duncan, Otis Dudley, and Albert J. Reiss, Jr. Social Characteristics of Urban and Rural Communities, 1950. New York: John Wiley and Sons.

1956*	Duncan, Otis Dudley, Philip M. Hauser, and Beverly Davis Duncan. Methods of Urban Analysis: A Summary Report. Research Report AFPTRC-TN-56-1. San Antonio, TX: Air Force Personnel and Train- ing Research Center, Lackland Air Force Base.
1957	Duncan, Otis Dudley. "The Measurement of Population Distribution." Population Studies 11: 27-45.
1957	Duncan, Otis Dudley. "The Teaching of Demography in the United States of America." <i>The University Teaching of Social Sciences: Demogra-</i> <i>phy.</i> Paris: UNESCO.
1957	Hawley, Amos H., and Otis Dudley Duncan. "Social Area Analysis: A Critical Appraisal." <i>Land Economics</i> 33: 337–45.
1957	Duncan, Otis Dudley. "Community Size and the Rural-Urban Contin- uum." <i>Cities and Society: The Revised Reader in Urban Sociology</i> , edited by Paul K. Hatt and Albert J. Reiss, Jr., 35–45. New York: The Free Press.
1957	Duncan, Otis Dudley. "Report of the Committee on the 1960 Census [Population Association of America]." <i>Population Index</i> 23: 293– 305.
1957	Duncan, Otis Dudley. "Population Distribution and Community Struc- ture." Cold Spring Harbor Symposia on Quantitative Biology 22: 357-71.
1957	Duncan, Otis Dudley, Ray P. Cuzzort, and Beverly Duncan. "Levels of Living, Natural Resources, and Patterns of Economic Activity: Stud- ies Based on Small-Area Data." Report to Resources for the Future, Inc.
1957*	Duncan, Otis Dudley, and Beverly Duncan. <i>The Negro Population of Chicago: A Study of Residential Succession</i> . Chicago: The University of Chicago Press.
1958	Duncan, Otis Dudley, and Ray P. Cuzzort. "Regional Differentiation and Socio-Economic Change." <i>Papers and Proceedings of the Regional</i> <i>Science Association</i> 4: 163–77.
1958	Hauser, Philip M., and Otis Dudley Duncan. "Project on the Status of Demography as a Science: A Progress Report." <i>Bulletin de l'Institut</i> <i>International de Statistique</i> (Stockholm) 36: 280–88.
1958	Duncan, Otis Dudley, and Albert J. Reiss, Jr. "Suburbs and Urban Fringe." <i>The Suburban Community</i> , edited by William Dobriner, 45–66. New York: G. P. Putnam's Sons.
1958	Duncan, Otis Dudley. "Population Redistribution and Economic Growth: A Review." <i>Economic Development and Cultural Change</i> 7: 90–94.
1958	Duncan, Otis Dudley. "The Study of Social Change." Memorandum to the Social Science Research Council (New York). Unpublished man- uscript.
1959	Hauser, Philip M., and Otis Dudley Duncan. "Overview and Conclu- sions," "The Nature of Demography," "The Data and Methods," "Demography as a Body of Knowledge," and "Demography as a Profession." In <i>The Study of Population: An Inventory and Appraisal</i> , edited by Philip M. Hauser and Otis Dudley Duncan, 1–26, 29–44, 45–75, 76–105, and 106–17. Chicago: University of Chicago Press.

1959	Duncan, Otis Dudley. "Services Industries and the Urban Hierarchy." Papers and Proceedings of the Regional Science Association 5: 105– 20.
1959	Duncan, Otis Dudley. "An Appreciation of William Fielding Ogburn." Technology and Culture 1: 94–99.
1959	Duncan, Otis Dudley, and Stanley Lieberson. "Ethnic Segregation and Assimilation." American Journal of Sociology 64: 364-74.
1959	Duncan, Otis Dudley. "Residential Segregation and Social Differentia- tion." <i>International Population Conference</i> . Vienna: International Union for the Scientific Study of Population.
1959	Duncan, Otis Dudley. "Discussion of Papers by Professor Nisbet and Pro- fessor Heberle." <i>Pacific Sociological Review</i> 2: 27–28.
1959	Duncan, Otis Dudley. "Human Ecology and Population Studies." In <i>The Study of Population: An Inventory and Appraisal</i> , edited by Philip M. Hauser and Otis Dudley Duncan, 678–716. Chicago: The University of Chicago Press.
1959	Duncan, Otis Dudley. "Foreword." In <i>The Negro Professional Class</i> , G. Franklin Edwards, 3–4. Glencoe, IL: Free Press.
1959	Duncan, Otis Dudley, and Leo F. Schnore. "Cultural, Behavioral, and Ecological Perspectives in the Study of Social Organization." <i>Ameri-</i> <i>can Journal of Sociology</i> 65: 132–53.
1959*	Hauser, Philip M., and Otis Dudley Duncan, eds. <i>The Study of Popula-</i> <i>tion: An Inventory and Appraisal</i> . Chicago: University of Chicago Press.

The 1960s

1960	Duncan, Otis Dudley, and Harold W. Pfautz. "Translators' Preface." In Population and Society: Introduction to Social Morphology, Mau- rice Halbwachs, 7-30. Glencoe, IL: The Free Press.
1960	Duncan, Otis Dudley. "Manufacturing as an Urban Function: The Regional Viewpoint." Sociological Quarterly 1: 75–86.
1960	Duncan, Beverly, and Otis Dudley Duncan. "The Measurement of Intra- City Locational and Residential Patterns." <i>Journal of Regional Sci-</i> <i>ence</i> 2: 37–54.
1960*	Duncan, Otis Dudley, with W. Richard Scott, Stanley Lieberson, Beverly Duncan, and Hal H. Winsborough. <i>Metropolis and Region</i> . Balti- more: The Johns Hopkins University Press.
1960*	Halbwachs, Maurice. Population and Society: Introduction to Social Morphology, translated by Otis Dudley Duncan and Harold W. Pfautz. Chicago: University of Chicago Press.
1961	Duncan, Otis Dudley. "A Socioeconomic Index for all Occupations." In <i>Occupations and Social Status</i> , edited by Albert J. Reiss, 109–38. Glencoe, IL: Free Press.

1961	Duncan, Otis Dudley. "Properties and Characteristics of the Socioeco- nomic Index." In Occupations and Social Status, edited by Albert J. Reiss, 139–61. Glencoe, IL: Free Press.
1961	Duncan, Otis Dudley. "From Social System to Ecosystem." Sociological Inquiry 31: 140–49.
1961	Duncan, Otis Dudley. "Occupational Components of Educational Differ- ences in Income." <i>Journal of the American Statistical Association</i> 56: 783–91.
1961	Blau, Peter M., and Otis Dudley Duncan. "Eine Untersuchung Beruflicher Mobilitat in den Vereiningten Staaten." <i>Rolner Zeitschrift fur Soziol-</i> <i>ogie und Sozialpsychologie</i> 5: 171–88.
1961*	Duncan, Otis Dudley, Ray P. Cuzzort, and Beverly Duncan. Statistical Geography: Problems in Analyzing Areal Data. Glencoe, IL: Free Press.
1962	Duncan, Otis Dudley. "Demography." Collier's Encyclopedia 8: 95–96.
1962	Duncan, Otis Dudley. "The City's Economic Reach." Americas 14: 42–44.
1963	Duncan, Otis Dudley, and Robert W. Hodge. "Cohort Analysis of Differ- ential Natality." In <i>International Population Conference, New York</i> , 1961, 59–66. London: International Union for the Scientific Study of Population.
1963	Duncan, Otis Dudley, and Beverly Duncan. "Measuring Segregation." American Sociological Review 28: 133.
1963	Duncan, Otis Dudley. "Axioms or Correlations?" American Sociological Review 28: 452.
1963	Duncan, Otis Dudley, and Robert W. Hodge. "Education and Occupa- tional Mobility: A Regression Analysis." <i>American Journal of Sociol-</i> ogy 68: 629–44.
1964	Duncan, Otis Dudley. "Ecology, Human." Encyclopaedia Britannica 7: 923–24.
1964	Duncan, Otis Dudley. "Residential Areas and Differential Fertility." Eugenics Quarterly 11: 82-89.
1964	Duncan, Otis Dudley. "Social Mobility of the American Negro: Prospects for a Program of Studies." Report to the Ford Foundation.
1964	Ogburn, William Fielding, and Otis Dudley Duncan. "City Size as a Sociological Variable." In <i>Contributions to Urban Sociology</i> , edited by Ernest W. Burgess and Donald J. Bogue, 129–47. Chicago: Uni- versity of Chicago Press.
1964	Duncan, Otis Dudley. "Social Organization and the Ecosystem." In <i>Handbook of Modern Sociology</i> , edited by Robert E. L. Faris, 36–82. Chicago: Rand McNally & Co.
1964	Duncan, Otis Dudley. "Introduction." In William F. Ogburn on Culture and Social Change: Selected Papers, vii–xxii. Chicago: University of Chicago Press.

1964	Duncan, Otis Dudley. "Prefatory Note." In <i>Journey to Labor: A Study of</i> <i>Births in Hospitals and Technology</i> , Donnell Maynard Pappenfort, v-vi. Chicago: Population Research and Training Center (University of Chicago).
1964*	Duncan, Otis Dudley, ed. William F. Ogburn on Culture and Social Change: Selected Papers. Chicago: University of Chicago Press.
1965	Duncan, Otis Dudley. "The Trend of Occupational Mobility in the United States." <i>American Sociological Review</i> 30: 491–98.
1965	Blau, Peter M., and Otis Dudley Duncan. "Some Preliminary Findings on Social Stratification in the United States." <i>Acta Sociologica</i> 9 (FASC. 1–2): 4–24.
1965	Duncan, Otis Dudley, Ronald Freedman, J. Michael Coble, and Doris P. Slesinger. "Marital Fertility and Size of Family of Orientation." <i>Demography</i> 2: 508–15.
1965	Duncan, Otis Dudley. "Social Origins of Salaried and Self-Employed Pro- fessional Workers." <i>Social Forces</i> 44: 186–89.
1965	Rhodes, Albert Lewis, Albert J. Reiss, Jr., and Otis Dudley Duncan. "Occupational Segregation in a Metropolitan School System." <i>American Journal of Sociology</i> 70: 682–94.
1965	Duncan, Otis Dudley. "Farm Background and Differential Fertility." Demography 2: 240–49.
1966	Duncan, Otis Dudley. "Path Analysis: Sociological Examples." American Journal of Sociology 72: 1–16.
1966	Duncan, Otis Dudley. "Methodological Issues in the Analysis of Social Mobility." In <i>Social Structure and Mobility in Economic Develop-</i> <i>ment</i> , edited by Neil J. Smelser and Seymour Martin Lipset, 51–97. Chicago: Aldine.
1966	Duncan, Otis Dudley. "Occupation Trends and Patterns of Net Mobility in the United States." <i>Demography</i> 3: 1–18.
1966	Duncan, Otis Dudley, and James D. Cowhig. "Social Backgrounds and Occupational Commitment of Male Wageworkers in Agriculture." <i>Agriculture Economics Research</i> 18: 129–35.
1966	Duncan, Otis Dudley. "The 1970 Census: National Uses: Challenge and Opportunity." 1966 Proceedings of the Social Statistics Section, American Statistical Association, 2–6.
1967	Duncan, Otis Dudley. "After the Riots." The Public Interest 9: 3-7.
1967	Duncan, Otis Dudley. "Discrimination Against Negroes." Annals of the American Academy of Political and Social Science 371: 85–103.
1967*	Blau, Peter M., and Otis Dudley Duncan. <i>The American Occupational Structure</i> . New York: Free Press.
1968	Duncan, Otis Dudley. "Ability and Achievement." <i>Eugenics Quarterly</i> 15: 1–11.
1968	Duncan, Otis Dudley. "Patterns of Occupational Mobility Among Negro Men." <i>Demography</i> 5: 11–22.
1968	Duncan, Otis Dudley, and Beverly Duncan. "Minorities and the Process of Stratification." <i>American Sociological Review</i> 33: 356-64.

1968	Duncan, Otis Dudley. "Statement of Otis Dudley Duncan of the Univer- sity of Michigan." In <i>The Rural to Urban Population Shift</i> , 99–101. National Manpower Conference, Committee on Government Oper- ations, United States Senate. Washington, DC: U.S. Government Printing Office.
1968	Duncan, Otis Dudley, Archibald O. Haller, and Alejandro Portes. "Peer Influences on Aspirations: A Reinterpretation." <i>American Journal of</i> <i>Sociology</i> 74: 119–37.
1968	Duncan, Otis Dudley. "Inheritance of Poverty or Inheritance of Race?" In On Understanding Poverty, edited by Daniel P. Moynihan, 85–110. New York: Basic Books.
1968	Duncan, Otis Dudley. "Social Stratification and Mobility: Problems in the Measurement of Trend." In <i>Indicators of Social Change</i> , edited by Eleanor Bernert Sheldon and Wilbert E. Moore, 675–719. New York: Russell Sage Foundation.
1969	Duncan, Otis Dudley. "Contingencies in Constructing Causal Models." Sociological Methodology 1: 74–112.
1969	Duncan, Otis Dudley. "Humanokologie (Human Ecology)." In Worter- buch der Soziologie, edited by W. Bernsdorf, 427–31. Stuttgart: Fer- dinand Enke.
1969	Duncan, Otis Dudley. "Inequality and Opportunity." <i>Population Index</i> 35: 361–66.
1969	Duncan, Otis Dudley. "Some Linear Models for Two-Wave, Two-Variable Panel Analysis." <i>Psychological Bulletin</i> 72: 177–82.
1969	Duncan, Otis Dudley, and Beverly Duncan. "Family Stability and Occupational Success." Social Forces 16: 273–85.
1969	Duncan, Otis Dudley. "Social Forecasting: The State of the Art." <i>The Public Interest</i> 17: 88–118.
1969*	Duncan, Otis Dudley. <i>Toward Social Reporting: Next Steps.</i> New York: Russell Sage Foundation.

The 1970s

1970	Duncan, Otis Dudley. "Duncan's Corrections of Published Text of 'Peer Influences on Aspirations: A Reinterpretation.'" <i>American Journal of</i> <i>Sociology</i> 75: 1042–46. Corrected version reprinted in <i>Causal Mod-</i> <i>els in the Social Sciences</i> , edited by Hubert M. Blalock, Jr., 219–44 (Chicago: Aldine Atherton, 1971).
1970	Duncan, Otis Dudley. "Partials, Partitions, and Paths." Sociological Meth- odology 2: 38–47.
1970	Duncan, Otis Dudley. "Observations on Population." Concerned Demog- raphy (December 1970): 27–30.
1972	Duncan, Otis Dudley, and David L. Featherman. "Psychological and Cul- tural Factors in the Process of Occupational Achievement." <i>Social</i> <i>Science Research</i> 1: 121–45.
1972	Duncan, Otis Dudley. "Unmeasured Variables in Linear Models for Panel Analysis." <i>Sociological Methodology</i> 4: 36–82.

1972	Duncan, Otis Dudley. "Federal Statistics, Non-Federal Statisticians." 1972 Proceedings of the American Statistical Association, Social Sta- tistics Section, 151–53.
1972*	Duncan, Otis Dudley, David L. Featherman, and Beverly Duncan. Socio- economic Background and Achievement. New York: Seminar Press.
1973	Duncan, Otis Dudley, and David L. Featherman. "Psychological and Cul- tural Factors in the Process of Occupational Achievement." In <i>Struc- tural Equation Models in the Social Sciences</i> , edited by Arthur S. Goldberger and Otis Dudley Duncan, 229–53. New York: Seminar Press.
1973*	Duncan, Otis Dudley, Howard Schuman, and Beverly Duncan. Social Change in a Metropolitan Community. New York: Russell Sage Foundation.
1973*	Duncan, Otis Dudley, and Arthur S. Goldberger, eds. Structural Equation Models in the Social Sciences. New York: Seminar Press.
1974	Duncan, Otis Dudley. "Reanalysis of the 1949 Survey." In <i>Mobility in Britain Reconsidered</i> , Oxford Studies in Social Mobility, Working Papers 2, edited by J. M. Ridge, 9–22. Oxford: Clarendon Press.
1974	Schuman, Howard, and Otis Dudley Duncan. "Questions About Attitude Survey Questions." <i>Sociological Methodology</i> 5: 232–51.
1974	Duncan, Otis Dudley. "Developing Social Indicators." Proceedings of the National Academy of Sciences 71: 5096–102.
1974	Duncan, Otis Dudley. "Comment on Jacob Mincer and Solomon Polachek, 'Family Investments in Human Capital: Earnings of Women.'" Journal of Political Economy 82: \$109-\$110.
1974	 Duncan, Otis Dudley. "Report on a Conference." In Social Indicators, 1973: A Review Symposium, edited by Roxann A. Van Dusen, 1–19. Washington: Social Science Research Council, Center for Coordination of Research on Social Indicators.
1974	Duncan, Otis Dudley. "Stouffer Award: Duncan Requests Reconsider- ation of Award." ASA Footnotes 2 (December): 2.
1975	Duncan, Otis Dudley. "Some Linear Models for Two-Wave, Two-Variable Panel Analysis, with One-Way Causation and Measurement Error." In <i>Quantitative Sociology</i> , edited by Hubert M. Blalock, Jr., et al., 285–306. New York: Academic Press.
1975	Duncan, Otis Dudley. "Measuring Social Change via Replication of Surveys." In <i>Social Indicator Models</i> , edited by K. C. Land and S. Spilerman, 105–27. New York: Russell Sage Foundation.
1975	Duncan, Otis Dudley. "Autobiographical Statement." Prepared at the Request of the Home Secretary, National Academy of Sciences, Janu- ary 1974.
1975	Duncan, Otis Dudley. "Partitioning Polytomous Variables in Multiway Contingency Analysis." Social Science Research 4: 167–82.
1975	Duncan, Otis Dudley. "Does Money Buy Satisfaction?" Social Indicators Research 2: 267–74.
1975	Duncan, Otis Dudley. "The Statistics of Leo Goodman." Social Indicators Newsletter 6: 4–5.

1975	Duncan, Otis Dudley. "Some Issues for Social Science in the ERDA National Plan." <i>Environmental Sociology</i> 8: 29–32.
1975*	Duncan, Otis Dudley. Introduction to Structural Equation Models. New York: Academic Press.
1978	Duncan, Otis Dudley. "Science Indicators and Social Indicators." In <i>Toward a Metric of Science: The Advent of Science Indicators</i> , edited by Y. Elkana, J. Lederberg, Robert K. Merton, A. Thackray, and Har- riet Zuckerman, 31–38. New York: John Wiley and Sons.
1978	Duncan, Otis Dudley. "Sociologists Should Reconsider Nuclear Energy." Social Forces 57: 1–22.
1978	Duncan, Otis Dudley. "Multiway Contingency Analysis." Contemporary Sociology 7: 403–405.
1978*	Beverly Duncan and Otis Dudley Duncan. Sex Typing and Social Roles: A Research Report. New York: Academic Press.
1979	Duncan, Otis Dudley. "How Destination Depends on Origin in the Mobility Table." <i>American Journal of Sociology</i> 84: 793-804.
1979	Duncan, Otis Dudley. "Indicators of Sex Typing: Traditional and Egali- tarian, Situational and Ideological Responses." <i>American Journal of</i> <i>Sociology</i> 85: 251–60.
1979	Duncan, Otis Dudley, and James A. McRae, Jr. "Multiway Contingency Analysis with a Scaled Response or Factor." <i>Sociological Methodol-</i> <i>ogy</i> 10: 68–85.
1979	Duncan, Otis Dudley. "Constrained Parameters in a Model for Categori- cal Data." Sociological Methods and Research 8: 57–68.
1979	Duncan, Otis Dudley, David L. Featherman, and Janet T. Spence. "Sex Typing and Achievement in American Women" (panel discussion). Bulletin of the American Academy of Arts and Sciences 32: 19–36.

The 1980s

1980	Duncan, Otis Dudley, and Howard Schuman. "Effects of Question Word- ing and Context: An Experiment with Religious Indicators." <i>Journal</i> of the American Statistical Association 75: 269–75.
1980	Duncan, Otis Dudley. "Testing Key Hypotheses in Panel Analysis." Socio- logical Methodology 11: 279–89.
1981	Duncan, Otis Dudley. "Two Faces of Panel Analysis: Parallels with Com- parative Cross-Sectional Analysis and Time-Lagged Association." <i>Sociological Methodology</i> 12: 281–318.
1981	Duncan, Otis Dudley. "A Ceremony of Research Reports." (Contribution to Review Symposium on <i>Qualitative and Quantitative Social</i> <i>Research: Papers in Honor of Paul F. Lazarsfeld</i> , edited by Robert K. Merton, James S. Coleman, and Paul H. Rossi.) <i>Contemporary</i> <i>Sociology</i> 10: 357–61.
1981	Duncan, Otis Dudley, chairman and co-author. <i>Surveys of Subjective Phenomena: Summary Report</i> , edited by Charles F. Turner and Elizabeth Martin. Washington, DC: National Academy Press.

1982	Duncan, Otis Dudley. "Review Essay: Statistical Methods for Categorical Data." <i>American Journal of Sociology</i> 87: 957–64.
1982	Duncan, Otis Dudley. "Rasch Measurement and Sociological Theory." Unpublished manuscript. Hollingshead Lecture, Yale University.
1982	Duncan, Otis Dudley. "Recent Cohorts Lead Rejection of Sex Typing." Sex Roles 8: 127-33.
1982	Duncan, Otis Dudley, and Charles Brody. "Analyzing <i>n</i> Rankings of Three Items." In Social Structure and Behavior: Papers in Honor of William Hamilton Sewell, edited by Robert M. Hauser, David Mechanic, Archibald O. Haller, and Taissa S. Hauser, 269–310. New York: Academic Press.
1982	Duncan, Otis Dudley, Douglas M. Sloane, and Charles Brody. "Latent Classes Inferred from Response-Consistency Effects." In Systems under Indirect Observation, part 1, edited by K. G. Joreskog and H. Wold, 19–64. Amsterdam: North-Holland.
1983	Duncan, Otis Dudley. "On a Dynamic Response Model of W.F. Kempf." Social Science Research 12: 393-400.
1984	Duncan, Otis Dudley. "Foreword." In <i>The Analysis of Cross-Classified Data Having Ordered Categories</i> , Leo A. Goodman, ix-xii. Cambridge: Harvard University Press.
1984	Duncan, Otis Dudley. "The Latent Trait Approach in Survey Research: The Rasch Measurement Model." In <i>Surveying Subjective Phenom-</i> <i>ena</i> , vol. 1, edited by Charles F. Turner and Elizabeth Martin, 210– 29. New York: Russell Sage Foundation, section 6.4.
1984	Duncan, Otis Dudley. "Rasch Measurement in Survey Research: Further Examples and Discussion." In <i>Surveying Subjective Phenomena</i> , vol. 2, edited by Charles F. Turner and Elizabeth Martin, 367–403. New York: Russell Sage Foundation.
1984*	Duncan, Otis Dudley. Notes on Social Measurement: Historical and Crit- ical. New York: Russell Sage.
1985	Duncan, Otis Dudley. "Generations, Cohorts, and Conformity." In Cohort Analysis in Social Research, edited by William M. Mason and Stephen E. Fienberg, 289–321. New York: Springer.
1985	Duncan, Otis Dudley. "Some Models of Response Uncertainty for Panel Analysis." Social Science Research 13: 126–41.
1985	Sobel, Michael E., Michael Hout, and Otis Dudley Duncan. "Exchange, Structure, and Symmetry in Occupational Mobility." <i>American Jour-</i> <i>nal of Sociology</i> 91: 359–72.
1985	Duncan, Otis Dudley. "New Light on the 16-Fold Table." American Jour- nal of Sociology 91: 88–128.
1986	Duncan, Otis Dudley. "Probability, Disposition, and the Inconsistency of Attitudes and Behavior." <i>Synthese</i> 68: 65–98.
1987	Duncan, Otis Dudley, and Magnus Stenbeck. "Are Likert Scales Unidi- mensional?" Social Science Research 16: 245–59.
1987	Michael Hout, Otis Dudley Duncan, and Michael E. Sobel. "Association and Heterogeneity: Structural Models of Similarities and Differ- ences." <i>Sociological Methodology</i> 17: 145–84.

1988	Duncan, Otis Dudley. "Some Ancient Anticipations of Probability." Chance 1: 16-24.
1988	Duncan, Otis Dudley, Magnus Stenbeck, and Charles Brody. "Discover- ing Heterogeneity: Continuous Versus Discrete Latent Variables." <i>American Journal of Sociology</i> 93: 1305–21.
1988	Duncan, Otis Dudley, and Magnus Stenbeck. "Panels and Cohorts: Design and Model in the Study of Voting Turnout." Sociological Methodology 18: 1-35.
1988	Duncan, Otis Dudley, and Magnus Stenbeck. "No Opinion or Not Sure?" Public Opinion Quarterly 52: 513–25.
1988	Duncan, Otis Dudley. "Notes and Commas." 1/1 3: 2.
1989	Duncan, Dudley [sic]. "Septimal Harmony for the Blues." 1/1 5: 4–5, 13.
1989	 Duncan, Otis Dudley, and Jean van der Tak. "Interview with Otis Dudley Duncan." In Demographic Destinies: Interviews with Presidents and Secretary-Treasurers of the Population Association of America. PAA Oral History Project. Volume 1: Presidents. No. 2: From 1961 through 1976, 164–99. Goleta, CA. Available at: http://geography. sdsu.edu/Research/Projects/PAA/Oral%20History%20Project/ PAA%20Presidents%20196176.pdf.

The 1990s and 2000s

1990	Duncan, Otis Dudley. "Family and Birth-Order Effects on Educational Attainment." In <i>Structures of Power and Constraint: Papers in</i> <i>Honor of Peter M. Blau</i> , edited by Craig Calhoun, Marshall W. Meyer, and W. Richard Scott, 167–77. Cambridge: Cambridge University Press.
1992	Duncan, Otis Dudley. "What If?" Contemporary Sociology 21: 667-68.
1993	Duncan, Dudley [sic]. "Max Weber's Unlucky Number." Sociological Theory 11: 230–33.
1993	Duncan, Dudley [sic]. "Why Superparticular?" 1/1 Journal of the Just Intonation Network 8: 1, 4–10, 14.
1993	Duncan, Dudley [sic]. "The Ptolemaic Antinomy." 1/1 Journal of the Just Intonation Network 8: 5, 14.
2000	Duncan, Otis Dudley. "Gun Use Surveys: In Numbers We Trust?" Crimi- nologist 25: 1–7.
2002	Duncan, Otis Dudley, and Tim Lambert, eds. "Statements by John R. Lott, Jr. on Defensive Gun Brandishing." <i>Deltoid: Tim Lambert's</i> <i>Weblog.</i> Available at: http://timlambert.org/2002/10/lottbrandish/.
2003	Duncan, Otis Dudley, and Tim Lambert. "Lott and Research Integrity." Deltoid: Tim Lambert's Weblog. Available at: http://timlambert. org/2003/02/lottethics/.
2003	Duncan, Otis Dudley. "John R. Lott, Jr. on Defensive Gun Use Statistics." Deltoid: Tim Lambert's Weblog. Available at: http://timlambert. org/2003/04/duncan3/.

2003	Duncan, Otis Dudley. "Facile Reporting: The Supposed Decline in Bibli- cal Literalism." <i>Public Perspective</i> 14: 3.
2004	Duncan, Otis Dudley. "The Creationists: How Many, Who, and Where?" Reports of the National Center for Science Education 24: 26-33.
n.d.	Duncan, Otis Dudley. "Quaestiones Convivales: Fortune, Chance, Proba- bility." Unpublished manuscript.

Additional Bibliographic Materials

Book Reviews

Approximately 50–100 book reviews in:

American Journal of Sociology, American Sociological Review, Kyklos, Milbank Memorial Fund Quarterly, Eugenics Quarterly, Rural Sociology, Journal of the American Statistical Association, Statistical Quarterly, The Annals of the American Academy of Political and Social Science, and Technology and Culture.

Unpublished Papers and Reports

Urban Analysis Series:

These reports were submitted by the Chicago Community Inventory, University of Chicago, to the Human Resources Research Institute, Air University, Maxwell Air Force Base, Alabama.²

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
No. 1	Centralization of Retail Trade in Chicago, 1935: A
	Pilot Study in Cost-Utility Analysis, November 1951.
No. 3	Cross-Utility Framework for Measurement of
	Locational Patterns: Definition and Illustrative
	Applications. January 1952.
No. 5	Spatial Patterns of Labor Force Industry Groups in
	Chicago, by Place of Work, 1947, and Place of
	Residence, 1940. May 1952.
No. 6	Inter-Industry Linkage: Chicago, 1947. February
	1952.
No. 9	Residential Rental Value as a Factor in the
	Ecological Organization of the City. July 1952.
No. 13	Inter-Industry Variations in Work-Residence
	Relationships of the Chicago Labor Force. October
	1952.
No. 14	Contributions to the Theory of Segregation Indexes.
	February 1953.
No. 16	Measures of Population Distribution in an Urban
1.0.10	Area. April 1953.

² All but numbers 1 and 3 were co-authored with Beverly Davis.

No. 20 Ecological Aspects of the Labor Force in the Chicago Metropolitan Area. May 1953.

The Chicago Urban Analysis Project: A Summary Report. November 1953.

Mustafa Emirbayer

University of Wisconsin-Madison

Appendix A: Duncan's Contemporaries

Slightly Older than Duncan (1905–1915)

- 1909 Sewell
- 1909 Riesman
- 1910 Merton
- 1910 Homans
- 1910 Shils
- 1913 Moore

Duncan's Generation (1916–1926: Five Years Plus or Minus)

- 1916 Mills
- 1916 Strauss
- 1917 Garfinkel
- 1919 Bell
- 1921 Duncan
- 1922 Lipset
- 1922 Goffman
- 1926 Coleman
- 1926 Blalock

Slightly Younger than Duncan (1927–1937)

- 1927 Bellah
- 1928 Becker
- 1928 Goodman
- 1929 Berger
- 1929 Tilly
- 1930 White
- 1930 Smelser

Appendix B: Duncan's Chronology

Stillwater, OK	1934–1938 (high school)
Oklahoma A&M	1938–1940 (undergraduate study)
Louisiana St.	1940–1941 (undergraduate senior year)
Minnesota	1941–1942 (graduate study; M.A. supervised
	by Chapin)
State U of Iowa	1943 (advanced work in psychology, ASTP)
U.S. Army	1942–1945 (enlisted man)
Chicago	1946–1948 (graduate study; Ph.D. supervised
	by Ogburn)
Penn State	1948-1950 (assistant professor of sociology
	and rural sociology)
Wisconsin	1950–1951 (assistant professor of sociology)
Chicago	1951–1956 (assistant professor of sociology)
Chicago	1957–1960 (research associate in human
	ecology, i.e., associate professor)
Chicago	1960–1962 (professor of human ecology)
Michigan	1962–1973 (professor of sociology)
Arizona	1973–1983 (professor of sociology)
Santa Barbara	1984–1987 (professor of sociology)
Santa Barbara	1987–2004 (emeritus professor of sociology)

- 1921 Born in Nacona, Texas, on December 2, 1921
- 1941 B.A., Louisiana State University
- 1942 M.A., University of Minnesota
- 1949 Ph.D., University of Chicago
- 1954 Married to Beverly Davis
- 1961 Elected Fellow, the American Statistical Association
- 1968 Co-Recipient, Sorokin Award, American Sociological Association
- 1969 Appointed Charles Horton Cooley University Professor of Sociology, Michigan
- 1969 President of Population Association of America
- 1970 Elected Fellow, American Academy of Arts and Sciences
- 1971 Chair, Social Statistics Section, American Statistical Association
- 1973 Elected Associate Member, American Sociological Association
- 1973 Elected Fellow, National Academy of Sciences
- 1973 Elected Member, American Philosophical Society
- 1977 Recipient, Samuel A. Stouffer Award, American Sociological Association
- 1979 Honorary Degree, Doctor of Humane Letters, University of Chicago

- 1980 Common Wealth Award of Distinguished Service in the Field of Sociology
- 1984 Honorary Degree, Doctor of Humane Letters, University of Wisconsin
- 1987 Retired from academia
- 1988 Beverly Duncan died, on January 8, 1988
- 1989 Honorary Degree of Doctor of Science, University of Arizona
- 1991 Irene G. Taeuber Award, Population Association of America
- 1994 Remarried to Beatrice Farwell Duncan
- 2004 Died in Santa Barbara, California, on November 16, 2004

M.A. Degree (1942):

"Comparison of Age of White Parents at Birth of First Child for Urban, Village, and Open Country Populations: An Analysis of Oklahoma Birth Registration Data." M.A. Thesis, unpublished. Department of Sociology, University of Minnesota.

Ph.D. Degree (1949):

"An Examination of the Problem of Optimum City-Size." Department of Sociology, University of Chicago. Published by Arno Press, New York, 1980.

Service in World War II (November 1942–January 1946):

Enlisted man in Army of the United States. Duty in Army Signal Corps, ASTP personnel psychology program, State University of Iowa; assignments in military psychology and personnel classification; training in Office of Strategic Services.

Research Directorships:

Chicago Community Inventory, University of Chicago: Associate Director (1951–1956); Acting Director (July–October 1952)

Population Research and Training Center, University of Chicago: Associate Director (1953–1956); Acting Director (December 1954– March 1955)

Visiting Positions:

1955 Michigan (visiting assistant professor of sociology, summer 1955)

- 1960 USC (Visiting associate professor of sociology, summer 1960)
- 1968 Oxford (visitor, Nuffield College, Michaelmas Term)
- 1973 IAS, Vienna (Guest Professor, Institute for Advanced Studies, Vienna, Fall Term)

Service on Research Commissions:

Human Ecology Study Section of the National Institutes of Health, 1959–1962; Research Grants Panel, Social Security Administration, 1964–1967; Commission on Population Growth and the American Future, 1972–1973; National Research Council, co-chair of Committee on the Survey of the Behavioral and Social Sciences, 1967–1968, Committee on Nuclear and Alternative Energy Systems, 1975–1979; Advisor, at various times, to U.S. Department of Health, Education, and Welfare, U.S. Department of Commerce, U.S. Census Bureau, Social Science Research Council, and Institute of Social Research.

Appendix C: Duncan's Collaborators in Chronological Order³

Ohlin, Lloyd E. Pfautz, Harold W. Artis, Jay W. Whitney, Vincent H. Duncan, Beverly	1949, 1953 1950, 1960 1951, 1951 1952 1953, 1955, 1955, 1956, 1956, 1956, 1957, 1957, 1960, 1960, 1961, 1963, 1968, 1969,
	1972, 1973, 1978
Reiss, Jr., Albert J.	1953, 1956, 1958, 1965
Stanton, Howard	1953
Kaufman, H. F.	1953
Gross, Neal	1953
Sewell, William H.	1953
Redick, Richard W.	1955
Spengler, Joseph J.	1956, 1956
Hauser, Philip M.	1956, 1956, 1958, 1959, 1959
Hawley, Amos H.	1957
Cuzzort, Ray P.	1957, 1958, 1961
Barber, Bernard	1959
Lieberson, Stanley	1959, 1960
Schnore, Leo F.	1959
Scott, W. Richard	1960
Winsborough, Hal H.	1960

3 Books and edited volumes indicated in italics.

Blau, Peter M.	1965, 1961, 1967
Hodge, Robert W.	1963
Ogburn, William F.	1964
Rhodes, Albert Lewis	1965
Freedman, Ronald	1965
Coble, J. Michael	1965
Slesinger, Doris P.	1965
Cowhig, James	1966
Haller, Archibald O.	1968
Portes, Alejandro	1968
Featherman, David L.	1972, 1972, 1975, 1979
Goldberger, Arthur S.	1973
Schuman, Howard	1973, 1974, 1980
McRae, James A., Jr.	1979
Spence, Janet T.	1979
Sloane, Douglas M.	1982
Brody, Charles	1982, 1982, 1988
Sobel, Michael E.	1985, 1987
Hout, Michael	1985, 1987
Stenbeck, Magnus	1987, 1988, 1988, 1988
Lambert, Tim	2002, 2003