

References

- Aalen O. (1976) Nonparametric inference in connection with multiple decrement models. *Scandinavian Journal of Statistics* 3, 15–27.
- Afifi A.A. and Azen S.P. (1979) *Statistical analysis, 2nd ed.* New York: Academic Press.
- Ahlburg D.A. and Vaupel J.W. (1990) Alternative projections of the U.S. population. *Demography* 27, 639–652.
- Alho J.M. (1989) Relating changes in life expectancy to changes in mortality. *Demography* 26, 705–709.
- Alho J.M. (1990a) Adjusting for nonresponse bias using logistic regression. *Biometrika* 77, 617–624.
- Alho J.M. (1990b) Logistic regression in capture-recapture models. *Biometrics* 46, 623–635.
- Alho J.M. (1990c) Stochastic methods in population forecasting. *International Journal of Forecasting* 6, 521–530.
- Alho J.M. (1991) Effect of aggregation on the estimation of trend in mortality. *Mathematical Population Studies* 3, 53–67.
- Alho J.M. (1992a) Estimating the strength of expert judgment: the case of U.S. mortality forecasts. *J. Forecasting* 11, 157–167.
- Alho J.M. (1992b) The magnitude of error due to different vital processes in population forecasts. *International Journal of Forecasting* 8, 301–314.
- Alho J.M. (1992c) On prevalence, incidence, and duration in general stable populations. *Biometrics* 48, 587–592.
- Alho J.M. (1994) Analysis of sample-based capture-recapture experiments. *Journal of Official Statistics*, 10, 245–256.
- Alho J.M. (1997) Scenarios, uncertainty and conditional forecasts of the world population. *Journal of the Royal Statistical Society. Series A* 160, 71–85.
- Alho J.M. (1998) A stochastic forecast of the population of Finland. *Reviews 1998/4*. Helsinki: Statistics Finland.
- Alho J.M. (Ed.) (1999) *Statistics, registries, and science. Experiences from Finland*. Helsinki: Statistics Finland.
- Alho J.M. (2000) A statistical look at Modeen's forecast of the population of Finland in 1934. *Yearbook of Population Research in Finland XXXVI*, 107–120.
- Alho J.M. (2002a) *Stochastic forecast of the Lithuanian population 2001–2050*. Project Report. Helsinki: The Research Institute of the Finnish Economy.

- Alho J.M. (2002b) *The population of Finland in 2050 and beyond*. Discussion Paper 826. Helsinki: The Research Institute of Finnish Economy.
- Alho J.M. (2003a) *Duration-dependent lifetables with applications to nuptiality*. Paper presented at the Annual Meeting of Population Association of America, May 2003, Minneapolis.
- Alho J.M. (2003b) Predictive distribution of adjustment for life expectancy change. *Working Papers 3*. Helsinki: Finnish Centre for Pensions.
- Alho J.M., Kangas J. and Kolehmainen O. (1996) Uncertainty in expert predictions of the ecological consequences of forest plans. *Applied Statistics* 45, 1–14.
- Alho J.M., Lassila J. and Valkonen T. (2005) Demographic uncertainty and evaluation of sustainability of pension systems. Forthcoming in Holzmann R. and E. Palmer (Eds.) (2005, in press) *Pension reform issues and prospects for non-financial defined contribution (NDC) schemes*. Washington, D.C.: The World Bank.
- Alho J.M., Mulry M.H., Wurdeman K. and Kim J. (1993) Estimating heterogeneity in the probabilities of enumeration for dual-system estimation. *Journal of the American Statistical Association* 88, 1130–1136.
- Alho J.M. and Nyblom J. (1997) Mixed estimation of old-age mortality. *Mathematical Population Studies* 6, 319–330.
- Alho J.M., Saari M. and Juolevi A. (2000) A competing risks approach to the two-sex problem. *Mathematical Population Studies* 8, 73–90.
- Alho, J.M. and Salo, M.A. (1998). *Kuntien valtionosuuden epävarma kohtaanto*. Studies in Social Policy 1. Joensuu: University of Joensuu.
- Alho J.M. and Salo, M.A. (2000) Merit rating and formula-based resource allocation. *International Journal of Educational Management* 14, 95–100.
- Alho J.M. and Spencer B.D. (1985) Uncertain population forecasting. *Journal of the American Statistical Association* 80, 306–314.
- Alho J.M. and Spencer B.D. (1990a) Effects of targets and aggregation on the propagation of error in mortality forecasts. *Mathematical Population Studies* 2, 209–227.
- Alho J.M. and Spencer B.D. (1990b) Error models for official mortality forecasts. *Journal of the American Statistical Association* 85, 609–616.
- Alho J.M. and Spencer B.D. (1991) A population forecast as a database: implementing the stochastic propagation of error. *Journal of Official Statistics* 7, 295–310.
- Alho J.M. and Spencer B.D. (1997) The practical specification of the expected error of population forecasts. *Journal of Official Statistics* 13, 203–225.
- Alho J.M. and Vanne R. (2005) On stochastic generational accounting. To appear in Gauthier A., Chu C., and Tuljapurkar S. (eds.) (2005, in press) *Riding the age-waves: allocating public and private resources across generations*. Dordrecht: Kluwer.
- Andersen E.B. (1980) *Discrete statistical models with social science applications*. Amsterdam: North-Holland.
- Andersen P.K. (1986) *Time-dependent covariates and Markov processes*. Pp. 82–103 in Moolgavkar and Prentice (1986).
- Andersen P.K., Borgan Ø, Gill R.D. and Keiding N. (1993) *Statistical models based on counting processes*. New York: Springer.
- Anderson M., Daponte, B.O., Fienberg S.E., Kadane J.B., Spencer B.D. and Steffey D.L. (2000) Sampling-based adjustment of the 2000 census – a balanced perspective. *Jurimetrics* 40, 341–356.
- Anderson M.A. and Fienberg, S.E. (1999) *Who counts? The politics of census-taking in contemporary America*. New York: Russell Sage Foundation.

- Anderson R.N. and Rosenberg H.M. (1998) Age standardization of death rates: implementation of the year 2000 standard. *National Vital Statistics Reports*, vol. 47, no. 3. Hyattsville: National Center for Health Statistics.
- Anderson R.N., Minino A.M., Hoyert D.L. and Rosenberg H.M. (2001) Comparability of cause of death between ICD-9 and ICD-10: preliminary estimates. *National Vital Statistics Reports*, vol. 49, no. 2. Hyattsville: Center for Health Statistics.
- Andrews G.H. and Beekman J.A. (1987) *Actuarial projections for the old-age, survivors, and disability insurance program of social security in the United States of America*. Itasca IL: Actuarial Education and Research Fund.
- Arrow K.J. (1971) *Essays in the theory of risk-bearing*. Chicago: Markham Publishing Co.
- Aubin J. (1991) *Viability theory*. Boston: Birkhäuser.
- Auerbach A.J. and Kotlikoff J.L. (1987). *Dynamic fiscal policy*. Cambridge: Cambridge University Press.
- Auerbach A.J., Gokhale J. and Kotlikoff L.J. (1991) Generational accounts – a meaningful alternative to deficit accounting. Pp. 55–110 in D. Bradford (1991) *Tax policy and the economy*. Vol. 5. Cambridge MA: MIT Press.
- Auerbach A.J., Kotlikoff, L.J. and Leibfritz, W. (1997). *Generational accounting around the world*. Chicago: The University of Chicago Press.
- Auerbach A.J. and Lee R.D. (Eds.) (2001) *Demographic change and fiscal policy*. Cambridge: Cambridge University Press.
- Avery R.B., Elliehausen G.E., and Kennickell A.B. (1986) *Measuring wealth with survey data: an evaluation of the 1983 Survey of Consumer Finances*. Washington D.C.: Board of Governors of the Federal Reserve System. Last revision April 1988. Available from <http://www.federalreserve.gov/pubs/oss/oss2/method.html>
- Azzalini A. (1996) *Statistical inference*. London: Chapman & Hall.
- Bachelier L. (1900) Théorie de la spéculation. *Ann. Sci. École Normale Sup.* III-17, 21–86. (An English translation is available: pp. 17–78 in Cootner P.H. (Ed.) (1964) *The random character of stock market prices*. Cambridge MA: MIT Press.)
- Bailey R. A. (1982) Confounding. Pp. 128–134 in Kotz, Johnson, and Read (1982), vol. 9.
- Balinski M.L. and Young H.P. (1982) *Fair representation*. New Haven: Yale University Press.
- Beale C. (2004) Reflections on 50+ years as a federal demographic statistician. *Amstat News*, April 2004, 6–8. Alexandria VA: American Statistical Association.
- Bell W.R. (1992) ARIMA and principal component models in forecasting age-specific fertility. Chapter 10 of Keilman N. and Crujisen H. (1992) *National population forecasting in industrialized countries*. Amsterdam: Swets and Zeitlinger.
- Bell W.R. (1993) Using information from demographic analysis in post-enumeration survey estimation. *Journal of the American Statistical Association* 88, 1106–1118.
- Bell W.R. (1997) Comparing and assessing time series methods for forecasting age-specific fertility and mortality rates. *Journal of Official Statistics* 13, 279–303.
- Bench K. (2002a) *Contamination of Census 2000 data collected in Accuracy and Coverage Evaluation block clusters*. Census 2000 Evaluation N.1. August 22, 2002. Washington, D.C.: U.S. Census Bureau.
- Bench K. (2002b) *P-sample match rate corrected for error due to inconsistent post-stratification variables*. DSSD A.C.E. Revision II Memorandum Series #PP-46. Washington, D.C.: U.S. Census Bureau.
- Bench K. (2003) P-sample match rate corrected for error due to inconsistent post-stratification variables. *Joint Statistical Meetings – Section on Survey Research Methods Proceedings*, 514–519. Alexandria, VA: American Statistical Association.

- Bernardelli H. (1941) Population waves. *Journal of Burma Research Society* 31, 1–18.
- Bernstein P.L. (1998) *Against the gods. The remarkable story of risk*. New York: Wiley.
- Berger J.O. (1980) *Statistical decision theory, foundations, concepts, and methods*. New York: Springer.
- Best N.K., Cowles M.K. and Vines K. (1995) *CODA: Convergence diagnosis and output analysis software for Gibbs sampling output. Version 3.0*. Technical Report. NRC Biostatistics Unit, University of Cambridge.
- Bickel, P.J. and Doksum, K.A. (2001) *Mathematical statistics: basic ideas and selected topics, Vol I., 2nd ed.* Upper Saddle River, NJ: Prentice Hall.
- Bickel, P.J. and Freedman, D.A. (1984) Asymptotic normality and the bootstrap in stratified sampling. *The Annals of Statistics* 12, 470–482.
- Bienen H. and Van de Walle N. (1991) *Of time and power, leadership duration in the modern world*. Stanford: Stanford University Press.
- Binder D.A. (1983) On the variances of asymptotically normal estimators from complex surveys. *International Statistical Review* 51, 279–292.
- Binder D.A. and Roberts R.R. (2003) Design-based and model-based methods for estimating model parameters. Pp. 29–48 in Chambers and Skinner (2003).
- Birkhoff G. (1976) House monotone apportionment schemes. *Proceedings of the National Academy of Sciences, U.S.A.*, 73, 684–686.
- Bishop Y.M.M., Fienberg S.E. and Holland P.W. (1975) *Discrete multivariate analysis*. Cambridge MA: The MIT Press.
- Blanchard, O., Chouraqui J.-C., Hagemann R.P. and Sartor N. (1990) The sustainability of fiscal policy: new answers to an old question. *OECD Economic Studies No. 15, Autumn 1990*.
- Bollerslev T., Chou R.Y. and Kroner K.F. (1992) ARCH modeling in finance. *Journal of Econometrics* 52, 5–59.
- Bongaarts J. and Bulatao R.A. (Eds.) (2000) *Beyond six billion*. Panel on Population Projections, National Research Council. Washington D.C.: National Academy Press.
- Bongaarts J. and Feeney G. (1998) On the quantum and tempo of fertility. *Population and Development Review* 24, 271–291.
- Boruch R.F. (1990) Research on the use of statistical data. *Proceedings of the Social Statistics Section*, 52–57. Alexandria, VA: American Statistical Association.
- Bowley A.L. (1924) Births and population of Great Britain. *Journal of the Royal Economic Society* 34, 188–192.
- Box G.E.P. and Jenkins G.M. (1976) *Time series analysis, revised ed.* San Francisco: Holden-Day.
- Box G.E.P. and Tiao G.C. (1973) *Bayesian inference in statistical analysis*. Reading MA: Addison-Wesley.
- Bozik J.E. and Bell W.R. (1987) Forecasting age-specific fertility using principal components. *Proceedings of the American Statistical Association, Social Statistics Section*, 396–401.
- Bozon M. and Heran F. (1989) Finding a spouse. A survey of how French couples meet. *Population, English Edition* 44, 90–121.
- Breslow N.E. (1974) Covariance analysis of censored survival data. *Biometrics* 30, 89–100.
- Breslow N.E. and Day N.E. (1980) *Statistical methods in cancer research, vol. I – The analysis of case-control studies*. Lyon: IARC.
- Breslow N.E. and Day N.E. (1987) *Statistical methods in cancer research, vol. II – The design and analysis of cohort studies*. Lyon: IARC.

- Brown J.J., Diamond D.D., Chambers R.L., Buckner L.J. and Teague A.D. (1999a) A methodological strategy for a one-number census in the UK. *Journal of the Royal Statistical Society A* 162, 247–267.
- Brown L.D., Eaton M.L., Freedman D.A., Klein S.P., Olshen R.A., Wachter K.W., Wells M.T. and Ylvisaker D. (1999b) Statistical controversies in census 2000. *Jurimetrics* 39, 347–375, Summer 1999.
- Bryan, T. (2004) Population estimates. Pp. 523–560 in J.S. Siegel and D.A. Swanson (2004).
- Burdick C., Manchester J. and Bang E. (2003) Stochastic models of the Social Security Trust Funds. *Research and Statistics Note No. 2003-01*. Office of Policy, Social Security Administration, Washington, D.C.
- Burgard S. (2002) Race and children's height in Brazil and South Africa. *Demography* 39, 763–790.
- Burgdörfer F. (1932) *Volk ohne Jugend*. Berlin: Kurt Vowinkel.
- Burgess R. (1988) Evaluation of the reverse record check estimates of undercoverage in the Canadian census of population. *Survey Methodology* 14, 137–156.
- Burke J. and Rust K. (1995) On the performance of jackknife variance estimation for systematic samples with small numbers of primary sampling units. *Proceedings of the American Statistical Association, Survey Research Section*, 321–326.
- Butz W.P. and Ward M.P. (1979) The emergence of countercyclical U.S. fertility. *American Economic Review* 69, 318–328.
- Cannan E. (1895) The probability of a cessation of the growth of population of England and Wales during the next century. *The Economic Journal* 5, 505–515.
- Carroll G.R. and Hannan M.T. (2000) *The demography of corporations and industries*. Princeton: Princeton University Press.
- Carvalho A. and Spencer B. (2001) Survival models for leadership duration. Unpublished manuscript.
- Caswell H. (2001) *Matrix population models, 2nd ed.* Sunderland: Sinauer.
- Chamberlain G. (1982) The general equivalence of Granger and Sims causality. *Econometrica* 50, 569–580.
- Chambers R.L. and Skinner C.J. (Eds.) (2003) *Analysis of survey data*. New York: Wiley.
- Chandra Sekar C. and Deming E. (1949) On a method of estimating birth and death rates and the extent of registration. *Journal of the American Statistical Association* 44, 101–115.
- Chatfield C. (1996) *The analysis of time series, 5th ed.* London: Chapman & Hall.
- Chiang C.L. (1968) *Introduction to stochastic processes in biostatistics*. New York: Wiley.
- Chiang C.L. (1984) *The life table and its applications*. Malabar: Krieger.
- Chib S. and Greenberg E. (1994) Bayes inference in regression models with ARMA(p,q) errors. *Journal of Econometrics* 64, 183–206.
- Chung K.L. (1974) *A course in probability theory, 2nd ed.* New York: Academic Press.
- Çinlar E. (1975) *Introduction to stochastic processes*. Englewood Cliffs: Prentice Hall.
- Citro C.F., Cork D.L. and Norwood J.L. (Eds.) (2004) *The 2000 census: counting under adversity*. Panel to Review the 2000 Census, National Research Council. Washington, D.C.: National Academy Press.
- Clayton D. and Schiffrers E. (1987a) Models for temporal variation in cancer rates I: age-period and age-cohort models. *Statistics in Medicine* 6, 449–467.
- Clayton D. and Schiffrers E. (1987b) Models for temporal variation in cancer rates II: age-period-cohort models. *Statistics in Medicine* 6, 469–481.
- Clemen R.T. (1989) Combining forecasts: a review and annotated bibliography. *International Journal of Forecasting* 5, 559–583.

- Clogg C.C. and Himes C.L. (1993) Comment. *Journal of the American Statistical Association* 88, 1072–1074.
- Coale A.J. (1955) The population of the United States in 1950 classified by age, sex, and color – a revision of census figures. *Journal of the American Statistical Association* 50, 16–54.
- Coale A. (1972) *The growth and structure of human populations*. Princeton University Press.
- Cochran W.G. (1954) Some methods of strengthening the common χ^2 tests. *Biometrics* 10, 417–451.
- Cochran W.G. (1977) *Sampling techniques*, 3rd ed. New York: Wiley.
- Cohen J. (1977) Ergodicity of age structure in populations with Markovian vital rates III: finite state moments and growth rate; an illustration. *Advances in Applied Probability* 9, 462–475.
- Cohen J. (1986) Population forecasts and confidence intervals for Sweden: a comparison of model-based and empirical approaches. *Demography* 23, 105–126.
- Coleman J.S. (1997) Constructed social networks for the study of diffusion. Pp. 180–193 in Spencer (1997).
- Conover W.J. (1980) *Practical nonparametric statistics*, 2nd ed. New York: Wiley.
- Cork D.L., Cohen M. L., and King B.F. (Eds.) (2004) *Reengineering the 2010 Census: Risks and Challenges*. Panel on Research on Future Census Methods, National Research Council. Washington, D.C.: National Academy Press.
- Cormack R.M. (1968) The statistics of capture-recapture methods. *Oceanography and Marine Biology. Annual Review* 6, 455–506.
- Cowan C. and Malec D. (1986) Capture-recapture models when both sources have clustered observations. *Journal of the American Statistical Association* 81, 347–353.
- Cox D.R. (1972) Regression models and life-tables. *Journal of the Royal Statistical Society. Series B* 34, 187–220.
- Cox D.R. (1975) Partial likelihood. *Biometrika* 62, 269–276.
- Cox D.R. and Hinkley D.V. (1974) *Theoretical statistics*. London: Chapman & Hall.
- Cox D.R. and Oakes D. (1984) *Analysis of survival data*. London: Chapman & Hall.
- Cressie N. (1993) *Statistics for spatial data*. New York: Wiley.
- Crouch E.A.C. and Wilson R. (1981) Reply to comments on the regulation of carcinogens. *Risk Analysis* 1, 107–111.
- Daponte B.O., Kadane J.B. and Wolfson, L.J. (1997) Bayesian demography: projecting the Iraqi Kurdish population, 1997–1990. *Journal of the American Statistical Association* 92, 1256–67.
- Darroch J.N., Fienberg S.E., Glonek G.F.V. and Junker B.W. (1993) A three-sample multiple-recapture approach to census population estimation with heterogeneous catchability. *Journal of the American Statistical Association* 88, 1137–1148.
- David I.P. and Sukhatme B.V. (1974) On the bias and mean square error of the ratio estimator. *Journal of the American Statistical Association* 69, 464–466.
- Davis S.T. (1994) Evaluation of postcensal county estimates for the 1980s. *Population Division Working Paper No. 5*. Washington, D.C. U.S. Census Bureau.
- Day J.C. (1993) Population projections of the United States by age, sex, race, and Hispanic origin: 1993 to 2050. *Current Population Reports, Series P-25, No. 1018*. Washington, D.C.: U.S. Census Bureau.
- DeBeer J. (1997) The effects of uncertainty of migration on national population forecasts: the case of the Netherlands. *Journal of Official Statistics* 13, 227–243.
- DeBeer J. and Alders M. (1999) Uncertainty of population forecasts: a stochastic approach. *Netherlands Official Statistics* 14, 19–25. Voorburg: Statistics Netherlands.

- De Finetti B. (1931) Sul significato soggettivo della probabilità. *Fundamenta Mathematicae* 17, 298–329.
- De Finetti B. (1937) La prévision: ses lois logiques, ses sources subjectives. *Annales de l'Institut Henri Poincaré* 7, 1–68.
- De Finetti B. (1974) *Theory of probability*, Vols. 1, 2. New York: Wiley.
- De Morgan A. (1847) *Formal logic or the calculus of inference, necessary and probable*. London: Taylor and Walton.
- DeGans H.A. (1999) *Population forecasting 1895–1945*. Dordrecht: Kluwer.
- DeGroot M.H. (1987) *Probability and statistics*, 2nd ed. Reading: Addison-Wesley.
- Deming W.E. (1964) *Statistical adjustment of data*. New York: Dover.
- Deville J.C. and Särndal C.-E. (1992) Calibration estimators in survey sampling. *Journal of the American Statistical Association* 87, 376–382.
- Deville J.C., Särndal C.-E. and Sautory O. (1993) Generalized raking procedures in survey sampling. *Journal of the American Statistical Association* 88, 1013–1020.
- Dickey D.A. and Fuller W.A. (1981) Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica*, 49, 1057–1072.
- Diggle P.J. (1983) *Statistical analysis of spatial point patterns*. London: Academic Press.
- Doll R. and Hill A.B. (1950) Smoking and carcinoma of the lung. preliminary report. *British Medical Journal* ii, 739–748.
- Doll R. and Peto R. (1976) Mortality in relation to smoking: 20 years' observations on male British doctors. *British Medical Journal* ii, 1525–1536.
- Doob J.L. (1953) *Stochastic processes*. New York: Wiley.
- Dorn H. (1950) Pitfalls in population forecasts and projections. *Journal of the American Statistical Association* 45, 311–334.
- dos Santos Silva I. (1999) *Cancer epidemiology: principles and methods*. Lyon: International Agency for Research on Cancer.
- Draper D. (1995) Assessment and propagation of model uncertainty (with discussion). *Journal of the Royal Statistical Society. Series B* 57, 45–70, with discussion 71–97.
- DuMouchel W.H. and Duncan G.J. (1983) Using sample survey weights in multiple regression analyses of stratified samples. *Journal of the American Statistical Association* 78, 535–543.
- Durbin J. (1953) Some results in sampling theory when the units are selected with unequal probabilities. *Journal of the Royal Statistical Society. Series B* 15, 262–269.
- Durbin J. and Koopman S.J. (2000) Time series analysis of non-Gaussian observations based on state space models from both classical and Bayesian perspectives. *Journal of the Royal Statistical Society. Series B* 62, 3–56.
- Durkheim E. (1937) *Les règles de la méthode sociologique*. Paris: Presses Universitaires de France.
- Easterlin R.A. (1961). The American baby boom in historical perspective. *American Economic Review* 51, 860–911.
- Edmonston B. and Schultze C. (Eds.) (1995) *Modernizing the U.S. census*. Panel on Census Requirements in the Year 2000 and Beyond, National Research Council. Washington, D.C.: The National Academy Press.
- Edwards W. (1982) *Conservatism in human information processing*. Pp. 359–369 in Kahneman et al. (1982).
- Efron B. and Morris C. (1971) Limiting the risk of Bayes and empirical Bayes estimators – part 1: the Bayes case. *Journal of the American Statistical Association* 66, 807–815.
- Efron B. and Tibshirani R.J. (1993) *An introduction to the bootstrap*. New York: Chapman & Hall.

- Ekamper P. and Keilman N. (1993) Sensitivity analysis in a multidimensional demographic projection model with a two-sex algorithm. *Mathematical Population Studies* 3, 21–36.
- Ekert O. (1986) Effets et limites des aides financières aux familles. *Population* 41, 327–348.
- Eklund K. (1995) *Kuolevuuden mallittaminen ja ennustaminen vanhusväestön keskuudessa*. Pro Gradu Thesis, Dept. of Statistics, University of Joensuu.
- Elliott M.R. and Little R.J.A. (2000). A Bayesian approach to combine information from a census, a coverage measurement survey and demographic analysis. *Journal of the American Statistical Association* 95, 351–363.
- Ellsberg D. (1961) Risk, ambiguity, and the Savage axioms. *The Quarterly Journal of Economics* 75, 643–669.
- Engle R.F. (1982) Autoregressive conditional heteroscedasticity with estimates of the variance of U.K. inflation. *Econometrica* 50, 987–1008.
- Erdős P. and Renyi A. (1959) On the central limit theorem for samples from a finite population. *Publications of the Mathematical Institute of the Hungarian Academy of Sciences* 4, 49–61.
- Ericksen E.P. (1974) A regression method for estimating population changes of local areas. *Journal of the American Statistical Association* 69, 867–875.
- ESCAP (2001) *Recommendation concerning the methodology to be used in producing the tabulations of population reported to states and localities pursuant to 13 U.S.C. 141(c)*. Report of the Executive Steering Committee for Accuracy and Coverage Evaluation Policy. March 1, 2001. Washington, D.C.: Census Bureau.
- Espenshade T.J. (1995) Using INS border apprehension data to measure the flow of undocumented migrants crossing the U.S.-Mexico frontier. *International Migration Journal* 29, 545–565.
- Espenshade T.J. (Ed.) (1997) *Keys to successful migration*. Washington, D.C.: The Urban Institute Press.
- Eurostat (2004) *Population statistics. Theme 3: Population and social conditions*. Luxembourg: European Commission.
- Farber J. (2001) *Accuracy and Coverage Evaluation: consistency of post-stratification variables, quality indicators of census 2000 and the Accuracy and Coverage Evaluation*. DSSD Census 2000 Procedures and Operations Memorandum Series B-10. Washington, D.C.: Census Bureau.
- Fay R.E. (1974) *Statistical considerations in estimating the current population of the United States*. Ph.D. Dissertation, Department of Statistics, University of Chicago.
- Fay R.E. (1992) Absolute values in the PES loss function analysis. Memorandum for the Committee on Adjustment of Postcensal Estimates (CAPE). June 29, 1992. Washington, D.C.: U.S. Census Bureau.
- Fay R.E. (1996) Alternative paradigms for the analysis of imputed survey data. *Journal of the American Statistical Association* 91, 490–498, with discussion 507–520.
- Fay R.E., Passel J.S., Robinson, J.G. and Cowan C.D. (1988). *The coverage of population in the 1980 census*. Washington, D.C.: U.S. Census Bureau.
- Fay R.E. and Thompson J.H. (1993) The 1990 post enumeration survey: statistical lessons, in hindsight. *Proceedings of the 1993 Annual Research Conference of the Bureau of the Census*, 71–91. Washington, D.C.: U.S. Census Bureau.
- Feeney G.M. (1970) Stable age by region distributions. *Demography* 6, 341–348.
- Feinstein A.R. (1985) Experimental requirements and scientific principles in case-control Studies. *Journal of Chronic Disease* 38, 127–133.

- Feldpausch R. (2002) *ESCAP II: E-Sample erroneous enumerations*. Executive Steering Committee for A. C. E. Policy II, Report No. 5, March 13, 2000 (revised). Washington, D.C.: U.S. Census Bureau.
- Fellegi I. (1980) Evaluation programme of the 1976 census of population and housing – A Sampling. *The Statistician* 29, 275–312.
- Feller W. (1968) *An introduction to probability theory and its applications, vol. I, 3rd ed.* New York: Wiley.
- Feller W. (1971) *An introduction to probability theory and its applications, vol. II.* New York: Wiley.
- Fieller E.C. (1932) The distribution of the index in a normal bivariate population. *Biometrika* 24, 428–440.
- Fienberg S.E. (1971) Randomization and social affairs: the 1970 draft lottery. *Science*, 171, 255–261.
- Fine T.L. (1973) *Theories of probability*. New York: Academic Press.
- Finney D.J. (1952) *Probit analysis, 2nd ed.* Cambridge: Cambridge University Press.
- Flanders W.D., Dersimonian R. and Rhodes P. (1990) Estimation of risk ratios in case-base studies with competing risks. *Statistics in Medicine* 9, 423–435.
- Fleischhacker J., DeGans H. and Burch T. (Eds.) (2003) *Populations, projections and politics*. Amsterdam: Rozenberg.
- Florens J. and Mouchart M. (1982) A note on non-causality. *Econometrica* 50, 583–591.
- Fowlkes E.B. (1987) Some diagnostics for binary regression via smoothing. *Biometrika* 74, 503–515.
- Fougstedt G. (1977) Trends and factors of fertility in Finland. *Commentationes Scientiarum Societatis Fennicae 7/1977*. Societas Scientiarum Fennica, Helsinki.
- Francisco C.A. and Fuller W.A. (1991) Quantile estimation with a complex survey design. *Annals of Statistics* 19, 454–469.
- Frankel M.R. (1983) Sampling theory. Pp. 21–67 in Rossi et al. (1983).
- Frankel M. and Kennickell A. (1995) Toward the development of an optimal stratification paradigm for the Survey of Consumer Finances. *Proceedings of the American Statistical Association, Survey Research Section*, 638–643.
- Freedman D. and Wachter K. (1994) Heterogeneity and census adjustment for the intercensal base. *Statistical Science* 9, 476–485.
- Fuller W.A. (1984) Least squares and related analyses for complex survey designs. *Survey Methodology* 10, 97–118.
- Fuller W.A. (1987) *Measurement error models*. New York: Wiley.
- Gabler S., Haeder S. and Lahiri P. (1999) A model based justification of Kish's formula for design effects for weighting and clustering. *Survey Methodology* 25, 105–106.
- Gail M.H. (1986) Adjusting for covariates that have the same distribution in exposed and unexposed cohorts. Pp. 3–18 in Moolgavkar and Prentice (1986).
- Gantmacher F.R. (1959) *The theory of matrices*, Vols. I–II. New York: Chelsea Publishing.
- Gavrilov L.A. and Gavrilova N.S. (1991) *The biology of life span: A quantitative approach*. Chur: Harwood Academic Publishers.
- Gelman A., Carlin J.B., Stern H.S. and Rubin D.B. (1995) *Bayesian data analysis*. London: Chapman & Hall.
- Geng Z., Guo J. and Fung W. (2002) Criteria for confounders in epidemiological studies. *Journal of the Royal Statistical Society. Series B* 64, 3–15.
- Germain M.-F. and Julien C. (1993) Results of the 1991 census coverage error measurement program. Pp. 55–70 in *Proceedings of Seventh Annual Research Conference of the Bureau of the Census*. Washington, D.C.: U. S. Census Bureau.

- Ghosh M. and Rao J.N.K. (1994) Small area estimation: an appraisal. *Statistical Science* 9, 55–93.
- Gilks W.R., Richardson S. and Spiegelhalter D. (1995) *Practical Markov chain Monte Carlo*. New York: Chapman & Hall.
- Gill R.D. and Keilman N. (1990) On the estimation of multidimensional demographic models with population registration data. *Mathematical Population Studies* 2, 119–143.
- Gini C. (1930) Calcolo di previsione della popolazione italiana del 1921 al 1961. *Notiziario demografico* 1930, 8–9.
- Girosi F. and King G. (2003) *Demographic forecasting*. Manuscript.
- Gissler M. (1999) *Routinely collected registers in Finnish health care*. Pp. 241–254 in Alho (1999).
- Gnedenko B. (1976) *The theory of probability*. Moscow: Mir Publishers.
- Goldstein H. (2003) *Multilevel statistical models, 3rd ed.* London: Arnold.
- Goodman L. (1967) On the age-sex composition of the population that would result from given fertility and mortality conditions. *Demography* 14, 423–441.
- Goodman L. (1968) Stochastic models for the population growth of the sexes. *Biometrika* 55, 469–487.
- Goodman L. (1991) Measures, models, and graphical displays in the analysis of cross-classified data (with discussion). *Journal of the American Statistical Association*, 86, 1085–1138.
- Gove W.R. (1973) Sex, marital status, and mortality. *American Journal of Sociology* 79, 45–67.
- Gower J.C. and Hand D.J. (1996) *Biplots*. London: Chapman & Hall.
- Granger C.W.J. (1969) Investigating causal relations by econometric models and cross-spectral methods. *Econometrica* 37, 424–438.
- Granger C.W.J. and Teräsvirta T. (1993) *Modelling nonlinear economic relationships*. Oxford: Oxford University Press.
- Green P.J. and Silverman B.W. (1994) *Nonparametric regression and generalized linear models*. London: Chapman & Hall.
- Greenacre M. (1984) *Theory and applications of correspondence analysis*. London: Academic Press.
- Griffin R. (2002) A.C.E. Revision II analysis of the synthetic assumption. *DSSD A.C.E. Revision II Memorandum Series #PP-49r*. Washington, D.C.: U.S. Bureau of the Census.
- Griffith D.A. (1988) *Advanced spatial statistics*. Dordrecht: Kluwer.
- Groves R.M., Dillman D.A., Eltinge J.L. and Little R.J.A. (Eds.) (2001) *Survey nonresponse*. New York: Wiley.
- Haberman S. (1999) *Actuarial models for disability insurance*. Boca Raton FL: Chapman-Hall.
- Haberman S.J. (1978) *Analysis of qualitative data, vol. 1*. New York: Academic Press.
- Haberman S.J. (1979) *Analysis of qualitative data, vol. 2*. New York: Academic Press.
- Haberman S.J. (1984) Adjustment by minimum discriminant information. *The Annals of Statistics* 12, 971–988.
- Haberman S.J., Jiang W. and Spencer B.D. (1998) *Activity 7: develop methodology for evaluating model-based estimates of the population size for states*. Final Report under contract 50-YABC-2-66023 for the Bureau of the Census. Chicago: National Opinion Research Center.

- Haberman S.J. and Spencer B.D. (2001) *Estimation of inconsistent poststratification in the 2000 A. C. E.* Report for the Bureau of the Census. July 18, 2001. Abt Associates: Cambridge, MA.
- Haberman S.J. and Spencer B.D. (2002) *Estimation of inconsistent poststratification in the 2000 A.C.E.* Report prepared for the Bureau of the Census under Contract No. 46-YABC-7-66020, January 18, 2002. Evanston, IL: Statistics Department, Northwestern University.
- Hájek J. (1960) Limiting distributions in simple random sampling from a finite population. *Publications of the Mathematical Institute of the Hungarian Academy of Sciences* 5, 361–374.
- Hájek J. (1964) Asymptotic theory of rejective sampling with varying probabilities from a finite population. *The Annals of Mathematical Statistics* 35, 1491–1523.
- Hájek J. (1981) *Sampling from a finite population*. New York: Dekker.
- Hanika A., Lutz W. and Scherbov S. (1997) Ein probabilistischer Ansatz zur Bevölkerungsvoraussätzung für Österreich. *Statistische Nachrichten*, 984–988. Vienna: Statistics Austria.
- Hanski I., Alho, J. and Moilanen, A. (2000) Estimating the parameters of survival and migration of individuals in metapopulations. *Ecology* 81, 239–251.
- Harala R. and Tammilehto-Luode M. (1999) *GIS and register-based population census*. Pp. 55–72 in Alho (1999).
- Härdle W. (1990) *Applied nonparametric regression*. Cambridge: Cambridge University Press.
- Hartley H.O. and Ross A. (1954) Unbiased ratio estimates. *Nature* 174, 270–271.
- Harvey A.C. (1989) *Forecasting, structural time series models and the Kalman filter*. Cambridge: Cambridge University Press.
- Hausman J.A. (1978) Specification tests in econometrics. *Econometrica*, 46, 1251–1271.
- Heligman L. and Pollard J.H. (1980) The age pattern of mortality. *Journal of the Institute of Actuaries* 107, 49–80.
- Hendershot G.E. and Placek P.J. (Eds.) (1981) *Predicting fertility*. Lexington: Lexington Books.
- Hengartner N. and Speed T.P. (1993) Assessing between-block heterogeneity within the post-strata of the 1990 Post-Enumeration Survey. *Journal of the American Statistical Association* 88, 1119–1125.
- Henry L. (1972) *Démographie. Analyse et modèles*. Paris: Larousse.
- Hjerpe R. (1989) *The Finnish economy 1860–1985, growth and structural change*. Bank of Finland Publications, Studies on Finland's Economic Growth no. 13. Helsinki: Government Printing Centre.
- Hobbs F. (2004) Age and sex composition. Pp.125–173 in Siegel and Swanson (2004).
- Hoel D. G. (1985) *The impact of occupational exposure patterns on quantitative risk estimation*. Pp. 105–118 in Hoel D.G., Merrill R.A. and Perera F.P. (1985) *Risk quantitation and regulatory policy*. Banbury Report 19. Cold Spring Harbor NY: Cold Spring Harbor Laboratory.
- Hoem J. (1970) *Grunnbegreper i formell befolkningslære*. Oslo: Universitetsforlaget.
- Hoem J. (1973) Levels of error in population forecasts. *Artikler 61*. Oslo: Central Bureau of Statistics.
- Hoem J. (1987) Statistical analysis of a multiplicative model and its application to the standardization of vital rates. *International Statistical Review*, 55, 119–152.

- Hoem J.M. and Funck Jensen U. (1982) Multistate life table methodology: a probabilist critique. Pp. 155–264 in Land K.C. and Rogers A. (1982).
- Hogan H. (1983) The forward trace study: its purpose and design. *Proceedings of the American Statistical Association, Survey Research Methods Section*, 168–172.
- Hogan H. (1992) The 1990 Post-Enumeration Survey: an overview. *The American Statistician*, 46, 261–269.
- Hogan H. (1993) The 1990 Post-Enumeration Survey: operations and results. *Journal of the American Statistical Association* 88, 1047–1060.
- Hogan H. (2001) *Accuracy and Coverage Evaluation: data and analysis to inform the ESCAP Report*. DSSD Census 2000 Procedures and Operations Memorandum Series B-1. Washington D.C.: U.S. Census Bureau.
- Horowitz J.L. (1994) Bootstrap-based critical values for the information matrix test. *Journal of Econometrics* 61, 395–411.
- Hosmer D.W. and Lemeshow S. (2000) *Applied logistic regression*, 2nd ed. New York: Wiley.
- Howson C. and Urbach P. (1993) *Scientific reasoning: the Bayesian approach*. 2nd ed. Chicago: Open Court.
- Hu Y. and Goldman N. (1990) Mortality differentials by marital status: an international comparison. *Demography* 27, 233–250.
- Huggins R.M. (1989) On the statistical analysis of capture experiments. *Biometrika* 76, 133–140.
- Hull H.F., Bettinger C.J., Gallaher M.M., Keller M.N., Wilson J., and Mertz G.J. (1988) Comparison of HIV-antibody testing in an STD clinic. *Journal of the American Medical Association* 260, 935–938.
- IImakunnas P., Laaksonen S., and Maliranta M. (1999) *Enterprise demography and job flows*. Pp. 73–88 in Alho (1999).
- I.N.E.D. (1976) *Natalité et politique démographique*. Paris: Presses Universitaires de France.
- Jabine T. and Schwartz R.E. (1974) Use of loss functions to determine sample size in the Social Security Administration. *Proceedings of the Social Statistics Section*, 103–110. Alexandria, VA: American Statistical Association.
- Jeffrey R. C. (1983) *The logic of decision*, 2nd ed. Chicago: University of Chicago Press.
- Jenkins J. (2004) Apportionment matters: fair representation in the House and Electoral College. Presented at the Institute for Policy Research, May 4, 2004. Department of Political Science, Northwestern University, Evanston, IL, USA.
- Jennings D. (1986) Judging inference adequacy in logistic regression. *Journal of the American Statistical Association* 81, 471–476.
- Johansen S. (1995) *Likelihood-based inference in cointegrated vector autoregressive models*. Oxford: Oxford University Press.
- Johnson N.L. and Kotz S. (1969) *Distributions in statistics, discrete distributions*. New York: Houghton Mifflin.
- Kadane J.B. (1992) Healthy scepticism as an expected-utility explanation of the phenomena of Allais and Ellsberg, in *Decision Making under Risk and Uncertainty: New Models and Empirical Findings*, J. Geweke, editor, 11–16 and in *Theory and Decision*, 32, 57–64.
- Kadane J.B. and Wolfson L. (1998) Experiences in elicitation. *The Statistician* 47, 3–19.
- Kahn H. (1962) *Thinking about the unthinkable*. New York: Avon Books.
- Kahneman D. and Tversky A. (1982) *On the study of statistical intuitions*. Pp. 493–508 in Kahneman et al. (1982).
- Kahneman D., Slovic P. and Tversky A. (Eds.) (1982) *Judgment under uncertainty: heuristics and biases*. Cambridge: Cambridge University Press.

- Kalton G. and Flores-Cervantes I. (2003) Weighting methods. *Journal of Official Statistics* 19, 81–97.
- Kannisto V. (1994) *Development of the oldest-old mortality, 1959–1990*. Odense: Odense University Press.
- Kannisto V. (1996) *The advancing frontier of survival*. Odense: Odense University Press.
- Kannisto V. and Nieminen M. (1996) *Revised life tables for Finland*. Population 1996:2. Helsinki: Statistics Finland.
- Kaplan E.L. and Meier P. (1958) Non-parametric estimation from incomplete observations. *Journal of the American Statistical Association* 53, 457–481, 562–563.
- Karlin S. and Lessard S. (1986) *Theoretical studies on sex ratio evolution*. Princeton, N.J.: Princeton University Press.
- Karlin S. and Taylor H.M. (1975) *A first course in stochastic processes, 2nd ed.* New York: Academic Press.
- Kass R.E. and Wasserman L. (1996) The selection of prior distributions by formal rules. *Journal of the American Statistical Association* 91, 1343–1370.
- Kearney A.T. (2002) *A.C.E. Revision II missing data evaluation*. DSSD A.C.E. Revision II Memorandum Series # PP-48. Washington, D.C.: U.S. Census Bureau.
- Keyfitz N. (1979) Information and allocation: two uses of the 1980 census. *The American Statistician* 33, 45–50.
- Keiding N. and Hoem J. (1976) Stochastic stable population theory with continuous time I. *Scandinavian Actuarial Journal*, 150–175.
- Keilman N. (1990) *Uncertainty in national population forecasting: issues, backgrounds, analyses, recommendations*. Amsterdam: Swets and Zeitlinger.
- Keilman N. (1997) Ex-post errors in official population forecasts in industrialized countries. *Journal of Official Statistics* 13, 245–277.
- Keilman N. (1998) How accurate are the United Nations world population projections? *Population and Development Review* 24, Supplement: Frontiers of Population Forecasting, 15–41.
- Keilman N. (2002) TFR predictions based on Brownian motion theory. *Yearbook of Population Research in Finland XXXVIII*, 207–219.
- Keilman N. and Kučera T. (1991) The impact of forecasting methodology on the accuracy of national population forecasts: evidence from the Netherlands and Czechoslovakia. *Journal of Forecasting* 10, 371–398.
- Keilman N., Pham D.Q. and Hetland A. (2002) *Norway's uncertain demographic future*. Social and Economic Studies 105. Oslo: Statistics Norway.
- Keinänen A. (2002) *Informaatiosektorille työllistymiseen vaikuttavat tekijät*. Master's Thesis, University of Joensuu.
- Keyfitz N. (1977) *Introduction to the mathematics of population, with revisions*. Reading: Addison-Wesley.
- Keyfitz N. (1981) The limits of population forecasting. *Population and Development Review* 7, 579–593.
- Keyfitz N. (1982) Can knowledge improve forecasts? *Population and Development Review* 8, 719–751.
- Keyfitz N. (1985) *Applied mathematical demography, 2nd ed.* New York: Springer.
- Keyfitz N. and Beekman J.A. (1984) *Demography through problems*. New York: Springer.
- Kim J. (1991, July 11) *1990 PES evaluation project P12: evaluation of synthetic assumption*. 1990 Coverage Studies and Evaluation Memorandum Series #N-4. Washington, D.C.: Census Bureau.

- Kim J., Blodgett R. and Zaslavsky A. (1991) Evaluation of the synthetic assumption – 1990 Post-Enumeration Survey. *Proceedings of the American Statistical Association, Survey Research Section* 254–259.
- King G. and Zeng L. (2002) Estimating risk and rate levels, ratios, and differences in case-control studies. *Statistics in Medicine* 21, 1409–1427.
- Kish L. (1965) *Survey sampling*. New York: Wiley.
- Kish L. (1987) *Statistical Design for Research*. Wiley: New York.
- Kish L. (1992) Weighting for unequal P_i . *Journal of Official Statistics* 8, 183–200.
- Kish L. (1995) Methods for design effects. *Journal of Official Statistics* 11, 55–78.
- Klein J.P. and Moeschberger M.L. (1997) *Survival analysis. Techniques for censored and truncated data*. New York: Springer.
- Kleinbaum D.G., Kupper L.L. and Morgenstern H. (1982) *Epidemiologic research*. New York: Van Nostrand.
- Kohler H.P. and Philipov D. (2001) Variance effects in the Bongaarts-Feeney formula. *Demography* 38, 1–16.
- Korn E.L. and Graubard B.I. (1995) Analysis of health surveys: accounting for the sampling design. *Journal of the Royal Statistical Society. Series A* 158, 263–295.
- Korn E.L. and Graubard B.I. (1999) *Analysis of health surveys*. New York: Wiley.
- Kostanich D. (2003a) A.C.E. Revision II: design and methodology. *DSSD A.C.E. Revision II Memorandum Series #PP-30*. Washington, D.C.: U.S. Census Bureau.
- Kostanich D. (2003b) A.C.E. Revision II: summary of methodology. *DSSD A.C.E. Revision II Memorandum Series #PP-35*. Washington, D.C.: U.S. Census Bureau.
- Kotz S., Johnson N. K., and Read C. B. (Eds.) (1982) *Encyclopedia of statistical sciences*. New York: Wiley.
- Krewski D. and Rao J.N.K. (1981) Inference from stratified samples: properties of the linearization, jackknife and balanced repeated replication methods. *Annals of Statistics* 9, 1010–1019.
- Kruskal W.H. and Mosteller F. (1979a). Representative sampling. I. Scientific literature. *International Statistical Review* 47, 13–24.
- Kruskal W.H. and Mosteller F. (1979b). Representative sampling. II. Scientific literature, excluding statistics. *International Statistical Review* 47, 111–128.
- Kruskal W.H. and Mosteller F. (1979c). Representative sampling. III. Scientific literature, current statistical literature. *International Statistical Review* 47, 245–265.
- Kruskal W.H. and Mosteller F. (1980). Representative sampling. IV. The history of the concept in statistics, 1895–1939. *International Statistical Review* 48, 169–195.
- Kyburg H.E. (1970) *Probability and inductive logic*. London: Macmillan.
- Land K.C. (1986) Methods for national population forecasts: a review. *Journal of the American Statistical Association* 81, 888–901.
- Land K.C. and Rogers, A. (Eds.) (1982) *Multiregional mathematical demography*. New York: Academic Press.
- Landwehr J.M., Pregibon D. and Shoemaker A.C. (1984) Graphical methods for assessing logistic regression models. *Journal of the American Statistical Association* 79, 61–71.
- Lassila J. and Valkonen T. (1999). *Eläkerahastot ja väestön ikääntyminen*. ETLA Tutkimuksia B 158. Helsinki: ETLA.
- LeBras H. (1977) Une formulation générale de la dynamique des populations. *Population* 32, 261–293.
- Ledet J. and Rogers A. (1988) Stable growth in native-dependent multistate population dynamics. *Mathematical Population Studies* 1, 157–171.

- Ledermann S. and Breas J. (1959) Les dimensions de la mortalité. *Population* 14, 637–682.
- Lee R.D. (1974) Forecasting births in post-transition populations: stochastic renewal with serially correlated fertility. *Journal of the American Statistical Association* 69, 607–617.
- Lee R.D. (1980) Aiming at a moving target: period fertility and changing reproductive goals. *Population Studies* 34, 205–226.
- Lee R.D. (2000). The Lee-Carter method for forecasting mortality, with various extensions and applications. *North American Actuarial Journal*, 4, 80–93.
- Lee R.D. and Carter L.R. (1992) Modeling and forecasting the time series of U.S. mortality. *Journal of the American Statistical Association* 87, 659–671.
- Lee R.D. and Miller T. (2001) Estimating the performance of the Lee-Carter method for forecasting mortality. *Demography* 38, 537–549.
- Lee R.D. and Tuljapurkar S. (1994) Stochastic population forecasts for the United States: beyond high, medium, and low. *Journal of the American Statistical Association* 89, 1175–1189.
- Lee R.D. and Tuljapurkar, S. (1998). Uncertain economic futures and social security finances. *American Economic Review*, May, 237–241.
- Lee Y. and Nelder J.A. (1996) Hierarchical generalized linear models. *Journal of the Royal Statistical Society. Series B* 58, 619–678.
- Lee Y. and Nelder J.A. (2001) Hierarchical generalised linear models: a synthesis of generalised linear models, random effects models and structured dispersions. *Biometrika* 88, 987–1006.
- Lehmann E.L. (1983) *Theory of point estimation*. New York: Wiley.
- Lehmann E.L. (1986) *Testing statistical hypotheses*, 2nd ed. New York: Wiley.
- Lehtonen R. and Pahkinen E. (2004) *Practical methods for design and analysis of complex surveys*, 2nd ed. Chichester: Wiley.
- Leslie P.H. (1945) On the use of matrices in certain population mathematics. *Biometrika* 33, 183–212.
- Levy P.S. and Lemeshow S. (1999) *Sampling of populations*, 3rd ed. New York: Wiley.
- Lewis E.G. (1942) On the generation and growth of a population. *Sankhya* 6, 93–96.
- Lexis W. (1875) *Einleitung in die Theorie der Bevölkerungs-Statistik*. Strasbourg: Trubner.
- Lillard L.A. and Panis C.W.A. (1996) Marital status and mortality: the role of health. *Demography* 33, 313–327.
- Lin G. (1999) Assessing structural change in the U.S. migration patterns: A log-rate modeling approach. *Mathematical Population Studies* 7, 217–238.
- Lindsey J.K. (1996) *Parametric statistical inference*. Oxford: Clarendon Press.
- Liu J.S. (2001) *Monte Carlo strategies in scientific computing*. New York: Springer.
- Lohr S.L. (1999) *Sampling: design and analysis*. Pacific Grove, CA: Duxbury.
- Lohr S. and Rao J.N.K. (1997) Jackknife variance estimation in multiple frame surveys. *Proceedings of the American Statistical Association, Survey Research Section*, 552–557.
- Louis T.A., Jabine T.B. and Gerstein M.A. (Eds.) (2003) *Statistical issues in allocating funds by formula*. Panel on Formula Allocations, National Research Council. Washington, D.C.: The National Academy Press.
- Lutz W. (Ed.) (1994) *The future population of the world*. London: Earthscan.
- Lutz W. (Ed.) (1996) *The future population of the world: what can we assume today?* Revised edition. London: Earthscan.
- Makridakis S., Andersen A., Carbone R., Fildes R., Hibon M., Lewandowski R., Newton J., Parzen E. and Winkler R. (1984) *The forecasting accuracy of major time series methods*. New York: Wiley.

- Malec D.J. and Griffin R.A. (2001, February 28) *Accuracy and Coverage Evaluation: assessment of synthetic assumptions*. DSSD Census 2000 Procedures and Operations Memorandum Series B-2. Washington, D.C.: U.S. Census Bureau.
- Mantel N. and Haenszel W. (1959) Statistical aspects of the analysis of data from retrospective studies of disease. *Journal of the National Cancer Institute*, 22(4), 719–748.
- March J.G. (1978) Bounded rationality, ambiguity, and the engineering of choice. *Bell Journal of Economics* 9, 587–608.
- March J.G. (1994) *A primer on decision making; how decisions happen*. New York: The Free Press.
- Marks E.S., Seltzer W. and Krotki K.J. (1974) *Population growth estimation: a handbook of vital statistics measurement*. New York: The Population Council.
- Marks E.S. (1979) The role of dual system estimation in census evaluation. P. 56–188 in Karol Krotki (Ed.) (1979) *Recent developments in DSE/PGE*. Alberta: University of Alberta Press.
- McCullagh P. and Nelder J.A. (1989) *Generalized linear models, 2nd ed.* London: Chapman & Hall.
- McDonald J. (1979) A time series approach to forecasting Australian total live-births. *Demography* 16, 575–601.
- McDonald J. (1980) Birth time series, models and structural relationships. *Journal of the American Statistical Association* 75, 39–41.
- McDonald J. (1981) Modeling demographic relationships: an analysis of forecast functions for Australian births. *Journal of the American Statistical Association* 76, 782–792.
- McFarland D.D. (1972) Comparison of alternative marriage models. Pp. 89–106 in Greville T.N.E. (Ed.) (1972) *Population dynamics*. New York: Academic Press.
- McKeown T. (1976) *The modern rise of population*. New York: Academic Press.
- Melnick D. (2002) The legislative process and the use of indicators in formula allocations. *Journal of Official Statistics*, 18, 353–369.
- Metropolis N., Rosenbluth A.W., Teller A.H. (1953) Equation of state calculations by fast computing machines. *Journal of Chemical Physics* 21, 1087–1092.
- Mode C.J. (1985) *Stochastic processes in demography and their computer implementation*. Berlin: Springer.
- Modeen G. (1934) Suomen väkiluvun tuleva kehitys ja sen taloudelliset seuraukset. *Kansantaloudellinen aikakauskirja* VI, 351–378.
- Moltchanov V., Kuulasmaa K. and Torppa J. (1999) *Quality Assessment of Demographic Data in the WHO MONICA Project*. World Health Organization. <http://www.ktl.fi/publications/monica/demoqa/demoqa.htm>. URN:NBN:fi-fe19991073.
- Moolgavkar S.H. and Prentice R.L. (1986) *Modern statistical methods in chronic disease epidemiology*. New York: Wiley-Interscience.
- Moses L.E. (1986) Statistical concepts fundamental to investigations. Pp. 3–26 in Bailar J.C. and Mosteller F. (Eds.) (1986) *Medical uses of statistics*. New England Journal of Medicine Books: Waltham, MA.
- Muhsam H.V. (1956) The utilization of alternative population forecasts in planning. *Bulletin of the Research Council of Israel* 5C, 133–146.
- Muller T. and Espenshade T.J. (1985) *The fourth wave*. Washington, D.C.: The Urban Institute Press.
- Mulry M.H. and Dajani A. (1989) The forward trace study. *Proceedings of the American Statistical Association, Survey Research Methods*, 675–680.

- Mulry M.H. and Spencer B.D. (1991) Total error in PES estimates of population: the dress rehearsal census of 1988. *Journal of the American Statistical Association* 86, 839–854 with discussion 855–863.
- Mulry M.H. and Spencer B.D. (1993) Accuracy of the 1990 census and undercount adjustments. *Journal of the American Statistical Association* 88, 1080–1091.
- Mulry M.H. and Spencer B.D. (2001, February 28) *Accuracy and Coverage Evaluation: overview of total error modeling and loss function analysis*. DSSD Census 2000 Procedures and Operations Memorandum Series B-19*. Washington, D.C.: U.S. Census Bureau. <http://www.census.gov/dmd/www/pdf/Fr19.pdf>
- Mulry M.H. and ZuWallack R. (2003) Confidence intervals and loss function analysis. *DSSD A.C.E. Revision II Memorandum Series #PP-42*. Washington, D.C.: U.S. Census Bureau.
- Muth J.F. (1960) Optimal properties of exponentially weighted forecasts of time series with permanent and transitory components. *Journal of the American Statistical Association* 55, 299.
- Myrdal A. and Myrdal G. (1934) *Kris i befolkningsfrågan*. Bonniers, Stockholm.
- National Research Council (2001) *Proceedings, first workshop of Panel to Review the 2000 Census (October 6, 1999)*. Committee on National Statistics. Washington D.C.: National Academy Press.
- Navarro A. and Asiala M. (2001) Accuracy and Coverage Evaluation: comparing accuracy. *DSSD Census 2000 Procedures and Operations Memorandum Series B-13*. February 28, 2001. Washington, D.C.: U.S. Bureau of the Census.
- Nelder J.A. and Wedderburn R.W.M. (1972) Generalised linear models. *Journal of the Royal Statistical Society. Series A* 135, 370–384.
- Nelson W. (1969) Hazard plotting for incomplete failure data. *Journal of Quality Technology*, 1, 27–52.
- Neutra R.R. and Drolette M.E. (1978) Estimating exposure-specific disease rates from case-control studies using Bayes theorem. *American Journal of Epidemiology* 108, 214–222.
- Nieminen, K. (1996) Liikenneonnettomuudet Helsingissä vuonna 1985. *Helsingin kaupunkisuunnitteluviraston julkaisuja 1996:16*. Helsinki.
- Nieminen M. and Markelin P. (1974) Suomen väestökirjanpito ja väkiluvun laskeminen. *Muistio no. 27*. Helsinki: Tilastokeskus.
- Nordberg L. (1989) Generalized linear modeling of sample survey data. *Journal of Official Statistics* 5, 223–239.
- Nordberg L. (1999) *Leo Törnqvist – the “grandfather” of Finnish statistics*. Pp. 163–176 in Alho J. (1999).
- Ogata Y., Katsura K., Keiding N., Holst C. and Green A. (2000) Empirical Bayes age-period-cohort analysis of retrospective incidence data. *Scandinavian Journal of Statistics* 27, 415–432.
- Öller L.E. and Barot B. (2000) The accuracy of European growth and inflation forecasts. *International Journal of Forecasting* 16, 293–315.
- Panel on Methodology for Statistical Priorities (1976) *Setting statistical priorities*. National Research Council. Washington, D.C.: The National Academy Press.
- Panel on Small-Area Estimates of Population and Income (1980) *Estimating population and income of small areas*. National Research Council. Washington, D.C.: National Academy Press.
- Passel J.S. (1993) Comment. *Journal of the American Statistical Association* 88, 1074–1077.

- Passel J.S., Siegel J.S. and Robinson J.G. (1982) *Coverage of the national population in the 1980 census, by age, sex, and race: preliminary estimates by demographic analysis*. Current Population Reports, Special Studies, P-23, No. 115. Washington, D.C.: U.S. Census Bureau.
- Pearl R. and Reed L.J. (1920) On the rate of growth of the United States since 1790 and its mathematical representation. *Proceedings of the National Academy of Sciences* 6, 275–288.
- Pfeffermann D. (1993) The role of sampling weights when modeling survey data. *International Statistical Review* 61, 317–337.
- Pflaumer P. (1992) Forecasting U.S. population totals with the Box-Jenkins approach. *International Journal of Forecasting* 8, 329–338.
- Pitkänen K. (1977) The reliability of the registration of births and deaths in Finland in the eighteenth and nineteenth centuries: some examples. *The Scandinavian Economic History Review*, 25, 138–159.
- Pitkänen K. (1986) Viime vuosisadan vaihteen väestötilasto ja suomalaisten miesten kuolleisuus. *Sosiaalilääketieteellinen Aikakauslehti* 23, 375–382.
- Pitkänen K.J. and Laakso M. (1999) The reliability of the Finnish mortality statistics: a historical review. Pp. 15–37 in Alho (1999).
- Pollard J.H. (1968) A note on multi type Galton-Watson processes with random branching probabilities. *Biometrika* 55, 589–590.
- Pollard J.H. (1973) *Mathematical models for the growth of human populations*. London: Cambridge University Press.
- Pollard J.H. (1975) Modelling human populations for projection purposes – some of the problems and challenges. *Australian Journal of Statistics* 17, 63–76.
- Portnoy S. (1988) Asymptotic behavior of likelihood methods for exponential families when the number of parameters tends to infinity. *Annals of Statistics* 16, 356–366.
- Potter F.J. (1990) A study of procedures to identify and trim extreme sampling weights. *Proceedings of the American Statistical Association, Survey Research Section*, 225–230.
- Poulain M. (1993) Confrontation des statistiques de migrations intra-Européennes: vers plus d'harmonisation? *European Journal of Population* 9, 353–381.
- Pregibon D. (1981) Logistic regression diagnostics. *Annals of Statistics* 9, 705–724.
- Prentice R.L., Self S.G. and Mason M.W. (1986) Design options for sampling within a cohort. Pp. 50–62 in Moolgavkar and Prentice (1986).
- Press W.H., Flannery B.P., Teukolsky S.A. and Vetterling W.T. (1992) *Numerical recipes in C, 2nd ed.*. Cambridge: Cambridge University Press.
- Pressat R. (1972) *Demographic analysis: methods, results, applications*. Chicago: Aldine-Atherton.
- Price (1947) A check on underenumeration in the 1940 census. *American Sociological Review* XII, 44–49.
- Qian J. and Spencer B.D. (1994) Optimally weighted means in stratified sampling. *Proceedings of the American Statistical Association, Survey Research Section*, 863–866.
- Raffelhüschen B. (1999) Generational accounting: method, data and limitations, in EU generational accounting in Europe. *European Economy, Reports and Studies No 1999:6*. Office for the Official Publications of the EC, Luxembourg.
- Raiffa H. and Schlaifer R. (1972) *Applied statistical decision theory*. Cambridge MA.: MIT Press.
- Ramsey F.P. (1926) *Truth and probability*. Pp. 61–93 in Kyburg H.E. and Smokler H.K. (Eds.) (1964) *Studies in subjective probability*. New York: Wiley.

- Rao C.R. (1973) *Linear statistical inference and its applications*, 2nd ed. New York: Wiley.
- Rao J.N.K. (1996) On variance estimation with imputed survey data. *Journal of the American Statistical Association* 91, 499–506, with discussion 507–520.
- Rao J.N.K. (2003) *Small area estimation*. New York: Wiley.
- Rao J.N.K. and Shao J. (1992) Jackknife variance estimation with survey data under hot deck imputation. *Biometrika* 79, 811–822.
- Rao J.N.K. and Wu C.F.J. (1985) Inference from stratified samples: second-order analysis of three methods for nonlinear statistics. *Journal of the American Statistical Association* 80, 620–630.
- Rao J.N.K. and Wu C.F.J. (1988) Resampling inference with complex survey data. *Journal of the American Statistical Association* 83, 231–241.
- Rao P.S.R.S. and Rao J.N.K. (1971) Small sample results for ratio estimators. *Biometrika* 58, 625–630.
- Rawls J. (1971) *A theory of justice*. Cambridge: Harvard University Press.
- Redfern P. (1974) The different roles of population censuses and interview surveys, particularly in the U.K. context. *International Statistics Review* 42, 131–146.
- Redfern P. (2001) A Bayesian model for estimating census undercount, taking emigration data from foreign censuses. *International Statistical Review* 69, 277–301, with addendum 30 July 2001.
- Redfern P. (2004) An alternative view of the 2001 census and future census taking. *Journal of the Royal Statistical Society. Series A* 209–248, with discussion 249–274.
- Rees P. and Wilson A.G. (1977) *Spatial population analysis*. London: Arnold.
- Rees P., Norma P. and Brown D. (2004) A framework for progressively improving small area population estimates. *Journal of the Royal Statistical Society. Series A* 167, 5–36.
- Rice J.A. (1995) *Mathematical statistics and data analysis*, 2nd ed. Belmont, California: Duxbury.
- Ripley B.D. (1981) *Spatial statistics*. New York: Wiley.
- Ripley B.D. (1987) *Stochastic simulation*. New York: Wiley.
- Robert C.P. and Casella G. (1999) *Monte Carlo statistical methods*. New York: Springer.
- Roberts L., Lafta R., Garfield R., Khudhairi J. and Burnham G. (2004) Mortality before and after the 2003 invasion of Iraq: cluster sample survey. *Lancet* 364, 1857–64.
- Robinson J.G. (2001) *ESCAP II: Demographic analysis results*. Executive Steering Committee for A. C. E. Policy II, Report No. 1, October 13, 2001. Washington, D.C.: U.S. Census Bureau.
- Robinson J.G., Adlakha A. and West, K.K. (2002) *Coverage of population in Census 2000. Results from demographic analysis*. Paper presented at the Annual Meeting of the Population Association of America, Atlanta, Georgia, May 2002.
- Robinson J.G., Ahmed B., Das Gupta P. and Woodrow K. (1993) Estimation of population coverage in the 1990 United States census based on demographic analysis. *Journal of the American Statistical Association*, 88, 1047–1060.
- Rogers A. (1975) *Introduction to multiregional mathematical demography*. New York: Wiley.
- Rogers A. (1986) Parametrized multistate population dynamics and projections. *Journal of the American Statistical Association* 81, 48–61.
- Rogers A. (1995) *Multiregional demography. Principles, methods and extensions*. New York: Wiley.
- Rogers A. and Ledent J. (1976) Increment-decrement life tables a: a comment. *Demography* 13, 287–290.

- Rosén, B. (1972) Asymptotic theory for successive sampling with varying probabilities without replacement, I and II. *The Annals of Mathematical Statistics* 43, 373–397, 748–776.
- Rosenblatt J.R. and Filliben J.J. (1971) Randomization and the draft lottery. *Science* 171, 306–308.
- Rossi P., Fisher G.A. and Willis G. (1986) *The condition of the homeless of Chicago*. Chicago: NORC.
- Rossi P.H., Wright J.D. and Anderson A.B. (1983) *Handbook of survey research*. New York: Academic Press.
- Rothman K.J. (1986) *Modern epidemiology*. Boston: Little, Brown and Company.
- Rubin D.B. (1987) *Multiple imputation for nonresponse in surveys*. New York: Wiley.
- Rubin D.B. (1996) Multiple imputation after 18+ years. *Journal of the American Statistical Association* 91, 434–489, with discussion 507–520.
- Rust K.F. and Rao J.N.K. (1996) Variance estimation for complex surveys using replication techniques. *Statistical Methods in Medical Research* 5, 283–310.
- Ryder N. (1956) Problems of trend determination during transition in fertility. *Milbank Memorial Fund Quarterly* 34, 5–21.
- Saari D.G. (1995) *Basic geometry of voting*. Berlin: Springer.
- Saboia J.L.M. (1974) Modeling and forecasting population time series. *Demography* 11, 483–492.
- Saboia J.L.M. (1977) Autoregressive integrated moving average (ARIMA) models for birth forecasting. *Journal of the American Statistical Association* 61, 706–719.
- Sacks J. and Ylvisaker D. (1978) Linear estimation for approximately linear models. *Ann. Statist.* 6, 1122–1137.
- Sands R.D. and Navarro A. (2001) 2000 census Accuracy and Coverage Evaluation survey variance estimates. *Proceedings of the American Statistical Association*. Joint Statistical Meetings 2001.
- Särndal C.-E., Swensson B. and Wretman J. (1992) *Model assisted survey sampling*. New York: Springer.
- Sauvy A. (1932) Calculs démographiques sur la population française jusqu'en 1980. *Journal de la société de statistique de Paris* 1932, 338–347.
- Savage I.R. (1975) Cost benefit analysis of demographic data. *Advances in Applied Probability – Supplement* 7, 62–71.
- Savage I.R. (1982) Who counts? *American Statistician* 36, 195–200, with discussion 200–207.
- Savage L.J. (1954) *The foundations of statistics*. New York: Wiley.
- Schindler E. (1998) Allocation of the ICM sample to the states for Census 2000. *Proceedings of the Survey Research Methods Section*, pp. 491–496. Alexandria, VA: American Statistical Association.
- Schoen R. (1988) *Modeling multigroup populations*. New York: Plenum Press.
- Schultz T.P. (1981) *Economics of population*. Reading: Addison-Wesley.
- Searle S.R. (1971) *Linear models*. New York: Wiley.
- Sen P.K. (1988) Asymptotics in finite population sampling. Pp. 291–331 in P.R. Krishnaiah and C. R. Rao (eds) *Sampling*. Handbook of Statistics 6. Amsterdam: North-Holland.
- Severini T. (2000) *Likelihood methods in statistics*. Oxford: Oxford University Press.
- Shao J. and Tu D. (1995) *The jackknife and bootstrap*. New York: Springer.
- Sheps M.C. and Menken J.A. (1973) *Mathematical models of conception and birth*. Chicago: University of Chicago Press.

- Shryock H.S., Siegel J.S. and Associates (1976) *Methods and materials of demography*, Condensed Edition by Stockwell E.G. New York: Academic Press.
- Siegel J.S., Passel R.N.W. and Robinson J. G. (1977) Developmental estimates of the coverage of the population of states in the 1970 census: demographic analysis. *Current Population Reports Series P-23*, No. 65. Washington, D.C.: U.S. Census Bureau.
- Siegel J.S. and Swanson D.A. (Eds.) (2004) *The methods and materials of demography*, 2nd ed. New York: Elsevier Academic Press.
- Simon J. (1977) *The economics of population growth*. Princeton: Princeton University Press.
- Sitter R.R. (1992) A resampling procedure for complex survey data. *Journal of the American Statistical Association* 87, 755–765.
- Skinner C.J., Holt D. and Smith T.M.F. (Eds.) (1989) *Analysis of complex surveys*. Chichester: Wiley.
- Slutsky E. (1927) The summation of random causes as the source of cyclic processes, translated in *Econometrica* 5, 105–146 (1937).
- Smith D.P. (1992) *Formal demography*. New York: Plenum Press.
- Smith P.C., Rice N. and Carr-Hill R. (2001) Capitation funding in the public sector. *Journal of the Royal Statistical Society. Series A* 164, 217–257.
- Smith S.K. and Mandell M. (1984) A comparison of population estimation methods: housing unit versus component II, ratio correlation, and administrative records. *Journal of the American Statistical Association* 79, 282–289.
- Smith S.K. and Tayman J. (2003) An evaluation of population projections by age. *Demography* 40, 741–757.
- Smith T.M.F. (1983) On the validity of inferences from non-random samples. *Journal of the Royal Statistical Society. Series A* 146, 394–403.
- Smith S.K., Tayman J. and Swanson D.A. (2001) *State and local population projections: methodology and analysis*. New York: Kluwer Academic/Plenum Publishers.
- Snedecor G.W. and Cochran W.G. (1967) *Statistical methods*, 6th ed. Ames: Iowa State University Press.
- Sommers P. (2003) The writing on the wall. *Chance* 16, 35–38.
- Spencer B.D. (1980a) *Benefit-cost analysis of data used to allocate funds*. New York: Springer.
- Spencer B.D. (1980b) Effects of biases in census estimates on evaluation of postcensal estimates. Pp. 232–236 in Panel on Small-Area Estimates of Population and Income (1980).
- Spencer B.D. (1980c) Implications of equity and accuracy for undercount adjustment: a decision-theoretic approach. *Proceedings of the 1980 conference on census undercount*, 204–216. Washington, D.C.: U.S. Census Bureau.
- Spencer B.D. (1982a) Technical issues in allocation formula design. *Public Administration Review* 42, 524–529.
- Spencer B.D. (1982b) Feasibility of benefit-cost analysis of data programs. *Evaluation Review* 6, 649–672.
- Spencer B.D. (1982c) Technical issues in allocation formula design. *Public Administration Review* 42, 524–529.
- Spencer B.D. (1985a) Optimal data quality. *Journal of the American Statistical Association*, 80, 564–573.
- Spencer B.D. (1985b) Statistical aspects of equitable apportionment. *Journal of the American Statistical Association* 80, 815–822.

- Spencer B.D. (1997a) A note on random walks and leadership duration. Unpublished manuscript.
- Spencer B.D. (1997b) *Statistics and public policy*. Oxford: Clarendon Press.
- Spencer, B. D. (1994) Sensitivity of benefit-cost analysis of data programs to monotone misspecification. *Journal of Statistical Planning and Inference* 39, 19–31.
- Spencer B.D. (2000a) An approximate design effect for unequal weighting when measurements may correlate with selection probabilities. *Survey Methodology* 26, 137–138.
- Spencer B.D. (2000b) *Total error model for Census 2000: how components of error can be estimated from the Bureau's planned evaluation studies*. Final Report, May 11, 2000. Activity 12 under contract 50-YABC-7-66020 for the Bureau of the Census. Cambridge MA: Abt Associates.
- Spencer B.D. and Foran W. (1991) Sampling probabilities for aggregations, with applications to NELS:88 and other educational longitudinal surveys. *Journal of Educational Statistics* 16, 21–34.
- Spencer B.D., Frankel M.R., Ingels S.J., Rasinski K.A. and Tourangeau R. (1990) *National Education Longitudinal Study of 1988 base year sample design report*. NCES Technical Report 90463. Washington, D.C.: National Center for Education Statistics.
- Spencer B.D. and Moses L.E. (1990) Needed data expenditure for an ambiguous decision problem. *Journal of the American Statistical Association* 85, 1099–1104.
- Starmer C. (2000) Developments in non-expected utility theory: the hunt for a descriptive theory of choice under risk. *Journal of Economic Literature* 38, 332–382.
- Statistics Canada (1999) Coverage. *1996 Technical Reports*, cat. no. 92-370-XIE, available at <http://www.statcan.ca/english/freepub/92-370-XIE/free.htm>.
- Statistics Finland (2001) Database.
- Statistics Finland (2002) Employment Statistics 1999–2000. *Population 2002:3*. Helsinki 2002.
- Statistisches Reichsamt (1930) Volkszählung. *Statistik des Deutschen Reichs, Band 401,II*. Berlin.
- Stigler S.M. (1986) *The history of statistics*. Cambridge MA: Harvard University Press.
- Stoto M. (1983) Accuracy of population projections. *Journal of the American Statistical Association*, 78, 13–20.
- Stukel D.M., Hidioglou M.A. and Särndal C.-E. (1996) Variance estimation for calibration estimators: a comparison of jackknifing versus Taylor linearization. *Survey Methodology* 22, 117–125.
- Suzara F.B. (2002) A study on the formulation of an assessment scale methodology: the United Nations experience in allocating budget expenditures among member states. *Journal of Official Statistics* 18, 481–510.
- Sykes Z. (1969) Some stochastic versions of the matrix model for population dynamics. *Journal of the American Statistical Association* 64, 111–130.
- Tabeau E., van den Berg Jeths A. and Heathcote C. (2001) *Forecasting mortality in developed countries*. Dordrecht: Kluwer Academic.
- Talousneuvoston aluejaosto (1972) *Kokonaistaloudellinen alueellinen tarkastelukehikko, liiteosa 1-2*. Helsinki: Valtion painatuskeskus.
- Taqqu M. (2001) Bachelier and his times: a conversation with Bernard Bru. *Finance and Stochastics* 5, 3–32.
- Teppo L. and Hakulinen T. (1999) *Finnish cancer registry – producing statistics and doing research*. Pp. 225–240 in Alho (1999).
- Ter Heide H. and Willekens F.J. (Eds.) (1984) *Demographic research and spatial policy*. London: Academic Press.

- Teräsvirta T. (1987) How we got the data. Pp. 1–7 in Pukkila T. and Puntanen S. (1987) *The Second International Tampere Conference in Statistics*. Tampere: University of Tampere.
- Theil H. (1966) *Applied econometric forecasting*. Chicago: Rand-McNally.
- Theil H. and Goldberger A.S. (1961) On pure and mixed statistical estimation in economics. *International Economic Review* 2, 65–78.
- Thisted R.A. (1988) *Elements of statistical computing*. New York: Chapman and Hall.
- Thomas A., Spiegelhalter D.J. and Gilks W.R. (1992) *BUGS: a program to perform Bayesian inference using Gibbs sampling*. Pp. 837–842 in Bernardo J.M., Berger J.O., Dawid A.P., Smith (Eds.) (1992) *Bayesian statistics 4*. Oxford: Clarendon Press.
- Thompson M.E. (1997) *Theory of sample surveys*. London: Chapman & Hall.
- Thompson W.S. and Whelpton P.K. (1933) *Population trends in the United States*. New York: McGraw-Hill.
- Tukey J.W. (1995) Discussion of the paper by Draper. P. 78 in Draper (1995).
- Turner C.F., Lessler J.T. and Gfroerer J.C. (Eds.) (1992) *Survey measurement of drug use. Methodological studies*. DHHS Publication No. (ADM) 92-1929. Washington D.C.: National Institute on Drug Abuse.
- Turpeinen O. (1978) Fertility and mortality in Finland since 1750. *Population Studies* 33, 101–114.
- Törnqvist L. (1948) An attempt to analyze the problem of an economical production of statistical data. *Nordisk tidskrift for teknisk økonomi*, 265–274. Reprinted as pp. 385–394 in Törnqvist L. (1981) *Collected Scientific Papers of Leo Törnqvist*. Series A7. Helsinki: The Research Institute of the Finnish Economy.
- Törnqvist L. (1949) Näkökohdat, jotka ovat määränneet primääristen prognoosiolettamusten valinnan. Pp. 68–74 in Hyppölä J., Tunkelo A. and Törnqvist L. (1949) *Suomen väestöä, sen uusiutumista ja tulevaa kehitystä koskevia laskelmia*. Tilastollisia tiedontantoja 38. Helsinki: Tilastokeskus.
- United Nations (1983) *Indirect techniques for demographic estimation. Manual X*. New York: United Nations.
- United Nations (1987) *Recommendations for the 1990 censuses of population and housing in the ECE region*. Statistical Standards and Studies No. 40. New York: United Nations.
- United Nations (1993) *World population prospects: the 1992 revision*. New York: United Nations.
- United Nations (2001) *World population prospects: the 2000 revision. Volume I: comprehensive tables*. New York: United Nations.
- U.S. Census Bureau (1949) *Forecasts of population and school enrollment in the United States: 1948 to 1960*. Current Population Reports, Series P-25, No. 18. Washington, D.C.: U.S. Census Bureau.
- U.S. Census Bureau (1958) *Illustrative projections of the population of the United States, by age and sex, 1960 to 1980*. Current Population Reports, Series P-25, No. 187. Washington, D.C.: U.S. Census Bureau.
- U.S. Census Bureau (1964) *Projections of the population of the United States, by age and sex, 1964 to 1985*. Current Population Reports, Series P-25, No. 286. Washington, D.C.: U.S. Census Bureau.
- U.S. Census Bureau (1984) *Projections of the population of the United States, by age, sex, and race: 1983 to 2080*. Current Population Reports. Series P-25, No. 952. Washington, D.C.: U.S. Census Bureau.
- U.S. Census Bureau (1992) *Projections of the population of the United States, by age, sex, race and Hispanic origin: 1992 to 2050*. Current Population Reports, Series P-25, No. 1092. Washington, D.C.: U.S. Census Bureau.

- U.S. Census Bureau (2000) Racial and ethnic classifications used in census 2000 and beyond. Washington, D.C. Retrieved February 7, 2002 from the World Wide Web: <http://www.census.gov/population/www/socdemo/race/racefacteb.html>
- U.S. Census Bureau (2001) *Census 2000 A.C.E. methodology, vols. 1–4*. Washington, D.C.: author. available at this time at <http://www.census.gov/dmd/www/pdf/Vol-1.pdf>
- U.S. Census Bureau (2002) *Current Population Survey design and methodology*. Technical Paper 63RV. March 2002 revision. Washington, D.C.: U.S. Census Bureau.
- U.S. Census Bureau (2003a) *Decision on intercensal population estimates*. March 12, 2003. Washington, D.C.: U.S. Census Bureau.
- U.S. Census Bureau (2003b) *Technical assessment of the A.C.E. Revision II estimates*. Washington D.C.: U.S. Census Bureau.
- U.S. Census Bureau (2004) *Accuracy and Coverage Evaluation of Census 2000: design and methodology*. Washington, D.C.: U.S. Census Bureau.
- U.S. Federal Committee on Statistical Methodology (1978) *Report on statistics for allocation of funds*. Statistical Policy Working Paper 1. Washington D.C.: U.S. Department of Commerce.
- U.S. Federal Committee on Statistical Methodology (1982) *An interagency review of time-series revision policies*. Statistical Policy Working Paper 7. Washington D.C.: U.S. Office of Management and Budget.
- U.S. Federal Committee on Statistical Methodology (2001) *Measuring and reporting sources of error in surveys*. Statistical Policy Working Paper 31–July 2001. Washington D.C.
- Valdés-Prieto S. (2000): The financial stability of notional account pensions. *Scandinavian Journal of Economics* 102, 395–417.
- Valkonen T. and Martelin T. (1999) *Social inequality in the face of death – linked registers in mortality research*. Pp. 211–224 in Alho (1999).
- Valliant R., Dorfman A.H. and Royall R.M. (2000) *Finite population sampling and inference: a prediction approach*. New York: Wiley.
- Van den Berg Jeths A., Hoogenveen R., de Hollander G. and Tabeau E. (2001) *A review of epidemiological approaches to forecasting mortality and morbidity*. Pp. 33–56 in Tabeau et al. (2001).
- Van Imhoff E. (2001) On the impossibility of inferring cohort fertility measures from period fertility measures. *Demographic Research* 5-2. <http://www.demographic-research.org/>.
- Van Imhoff E. (1990) The exponential multidimensional demographic projection model. *Mathematical Population Studies* 2, 171–182.
- Van Imhoff E. and Keilman N.W. (1991) *Lipro 2.0: an application of a dynamic demographic projection model to household structure in the Netherlands*. Amsterdam: Swets & Zeitlinger.
- Van Imhoff E. and Keilman N. (2000) On the quantum and tempo of fertility: comment. *Population and Development Review* 26, 549–553.
- Van Imhoff E., van der Gaag N., van Wissen L. and Rees Ph. (1997) The selection of internal migration models for European regions. *International Journal of Population Geography* 3, 137–159.
- Vartiainen T., Kartovaara L. and Tuomisto J. (1999) Environmental chemicals and changes in sex ratio. *Environmental Health Perspectives* 107, 813–815.
- Vaupel J.W. and Yashin A.I. (1985) Heterogeneity's ruses: some surprising effects of selection on population dynamics. *American Statistician* 39, 176–185.
- Verhulst P.F. (1838) Notice sur la loi que la population suit dans son accroissement. *Correspondence Mathématique et Physique Publiée par A. Quételet* (Bruxelles) 10, 113–121.

- Vermunt J.K. (1997a) *Log-linear models for event histories*. Thousand Oakes: Sage.
- Vermunt J.K. (1997b) *LEM 1.0: A general program for the analysis of categorical data. User's manual*. Tilburg: Tilburg University. (www.kub.nl/mto)
- Vinod H.D. and Ullah A. (1981) *Recent advances in regression methods*. New York: Marcel Dekker.
- Volinsky C.T., Madigan D., Raftery A.E. and Kronmal R. A. (1997) Bayesian model averaging in proportional hazard models: assessing the risk of stroke. *Applied Statistics*, 46, 433–448.
- Väestöennusteryhmä (1973) *Väestöennusteiden laadinnan järjestäminen*. Helsinki: Valtioneuvoston kanslian julkaisu.
- Wachter K. and Freedman D. (1999) The fifth cell: correlation bias in U.S. census adjustment. Technical Report Number 570, Department of Statistics, University of California, Berkeley.
- Wackernagel H. (1998) *Multivariate geostatistics: an introduction with applications*. Berlin: Springer.
- Wade A. (1987) *Social security area population projections: 1987*. Actuarial Study No. 99. Baltimore: U.S. Office of the Actuary, Social Security Administration.
- Wade A. (1989) *Social security area population projections 1989*. Actuarial Study No. 105. Baltimore: U.S. Office of the Actuary, Social Security Administration.
- Wahba G. and Wold S. (1975) A completely automatic French curve: fitting spline functions by cross validation. *Communications in Statistics* 4, 1–17.
- Wahlberg N., Moilanen A. and Hanski I. (1996) Predicting the occurrence of endangered species in fragmented landscapes. *Science* 273, 1536–1538.
- Wald A. (1947) *Sequential analysis*. New York: Wiley.
- Weisberg S. (1985) *Applied linear regression, 2nd ed.* New York: Wiley.
- Welsch R. E. (1983) Leverage. Pp. 610–611 in Kotz, Johnson, and Read (1982) vol. 4.
- West M., Harrison P.J. and Migon H.S. (1985) Dynamic generalized linear models and Bayesian forecasting (with discussion). *Journal of the American Statistical Association*. 80, 73–97.
- Wheeler D. (1984) *Human resource policies, economic growth, and demographic change in developing countries*. Oxford: Clarendon Press.
- Whelpton P.K. (1928) Population of the United States, 1925 to 1975. *American Journal of Sociology* 34, 253–270.
- Whelpton P.K. (1936) An empirical method of calculating future population. *Journal of the American Statistical Association* 31, 457–473.
- Whittle P. (1954) On stationary processes in the plane. *Biometrika* 41, 434–449.
- Whelpton P.K., Eldridge H.T. and Siegel J.S. (1947) *Forecasts of the population of the United States 1945–1975*. Washington D.C.: U.S. Census Bureau.
- Whelpton P.K. and Kiser C.V. (1946) Social and psychological factors affecting fertility: V. The sampling plan, selection, and the representativeness of couples in the inflated sample. *The Milbank Memorial Fund Quarterly*, 24, 71.
- Whelpton P.K. and Kiser C.V. (1947) Social and psychological factors affecting fertility: VI. The planning of fertility. *The Milbank Memorial Fund Quarterly*, 25, 63–111.
- Wicksell S.D. (1926) Sveriges framtida befolkning under olika förutsättningar. *Ekonomisk Tidskrift*, 28, 91–123.
- Wiebols G.A.H. (1925) *De toekomstige bevolkingsgrootte in Nederland*. Ph.D. thesis, Handelshogeschool Rotterdam. Vlaardingen.
- Wiener N. (1956) *The theory of prediction*. Pp. 156–190 in Beckenbach E. (Ed.) (1956) *Modern mathematics for the engineer*. New York: McGraw-Hill.

- Willekens F. (1999) Modeling approaches to the indirect estimation of migration flows: from entropy to EM. *Mathematical Population Studies* 7, 239–278.
- Williams D. (2001) *Weighing the odds*. Cambridge: Cambridge University Press.
- Williams D.A. (1982) Extra-binomial variation in logistic linear models. *Applied Statistics*, 31, 144–148.
- Wolf D.A. (1988) The multistate life table with duration-dependence. *Mathematical Population Studies* 1, 217–245.
- Wolter K.M. (1985) *Introduction to variance estimation*. New York: Springer.
- Wolter K.M. (1986) Some coverage error models for census data. *Journal of the American Statistical Association*, 81, 338–346.
- Wolter K.M. (1990) Capture-recapture estimation in the presence of a known sex ratio. *Biometrics* 46, 157–162.
- Woodruff R. S. (1952) Confidence intervals for medians and other position measures. *Journal of the American Statistical Association* 47, 635–646.
- Woodward M. (1999) *Epidemiology. Study design and data analysis*. Boca Raton: Chapman-Hall.
- World Bank (1992) *World population projections, 1992–1993*. Baltimore: Johns Hopkins University Press.
- Yule G.U. (1925) The growth of population and the factors which control it. *Journal of the Royal Statistical Society* 86, 1–58.
- Yamaguchi K. (1989) A formal theory for male-preferring stopping rules of childbearing: sex differences in birth order and in the number of siblings. *Demography* 26, 451–465.
- Zaslavsky A. M., Schenker N. and Belin T. R. (2001), Downweighting influential clusters in surveys: application to the 1990 Post-Enumeration Survey. *Journal of the American Statistical Association* 96, 858–869.
- Zaslavsky A.M. and Schirm A.L. (2002) Interactions between survey estimates and federal funding formulas. *Journal of Official Statistics*, 18, 371–391.
- Zaslavsky A.M. and Wolfgang G.S. (1993) Triple system modeling of the census, post-enumeration survey, and administrative list data. *Journal of Business and Economic Statistics* 11, 279–288.
- Zeger S.L. and Karim M.R. (1991) Generalized linear models with random effects: A Gibbs sampling approach. *Journal of the American Statistical Association* 86, 79–86.

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