References

- Alho, J.M. (1990). Adjusting for nonresponse bias using logistic regression. *Biometrika*, **77**, 617–624.
- Ansen, H., Hallen, S.-A., and Yalender, H. (1988). Statistics for regional and local planning in Sweden. *J. Official Stat.*, **4**, 35–46.
- Bailar, B.A. and Bailar, J.C., III (1978). Comparison of two procedures for imputing missing survey values. In *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 462–467.
- Bailar, B.A. and Bailar, J.C., III (1983). Comparison of the biases of the "Hot Deck" imputation procedure with an "Equal Weights" imputation procedure. *Incomplete Data in Sample Surveys*, W.G. Madow, I. Olkin, and D.B. Rubin, Eds., Vol. 3, Academic Press, New York, 420–470.
- Bailar, B.A. and Lanphier, C.M. (1978). Development of Survey Methods to Assess Survey Practices. American Statistical Association, Washington, D.C.
- Bailar, B.A., Bailey, L., and Corby, C. (1978). A comparison of some adjustment and weighting procedures for survey data. In *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 175–200.
- Baker, S.G. and Laird, N.M. (1988). Regression analysis of categorical variables with outcome subject to nonignorable nonresponse. *J. Am. Stat. Assoc.*, **83**, 62–69.
- Battese, G.E., Harter, R.M., and Fuller, W.A. (1988). An error component model for prediction of county crop areas using survey and satellite data. *J. Am. Stat. Assoc.*, **83**, 28–36.
- Bayless, D.L. and Rao, J.N.K. (1970). An empirical study of stabilities of estimators and variance estimators in unequal probability sampling (*n* = 3 or 4). *J. Am. Stat. Assoc.*, **65**, 1645–1667.
- Bean, J.A. (1975). Distribution and Properties of Variance Estimators for Complex Multistage Probability Samples. National Center for Health Statistics, Washington, D.C., Series 2, 65.
- Bell, W.R. (1996). Using information from demographic analysis in post-enumeration survey estimation. J. Am. Stat. Assoc., 88(423), 1106–1118.

- Bell, W.R. (1999). Accounting for uncertainty about variances in small area estimation. *Proc. Int. Stat. Inst.*, Topic 47, 57–59.
- Bethel, J. (1989). Sample allocation in multivariate surveys. Surv. Methodol., 15, 47–57.
- Bethlehem, J.G. (1988). Reduction of nonresponse bias through regression estimation. J. Official Stat., 4, 252–260.
- Biemer, P.P., Groves, R.M., Lyberg, L.E., Mathiowetz, N.A. and Sudman, S. (1991). *Measurement Errors in Surveys*. John Wiley and Sons, New York.
- Binder, D.A. (1983). On the variances of asymptotically normal estimators from complex surveys. *Int. Stat. Rev.*, **51**, 279–292.
- Binder, D.A. (1991). A framework for analyzing categorical survey data with nonresponse. *J. Official Stat.*, **7**, 393–404.
- Binder, D.A. and Patak, Z. (1994). Use of estimating functions for estimation from complex surveys. J. Am. Stat. Assoc., 89(427), 1035–1043.
- Binder, D.A. and Theberge, A. (1988). Estimating the variance of raking-ratio estimators. *Can. J. Stat.*, **16**, 47–55.
- Booth, G. and Sedransk, J. (1969). Planning some two-factor comparative surveys. J. Am. Stat. Assoc., 64, 560–573.
- Booth, J.G., Buttler, R.W., and Hall, P. (1994). Bootstrap methods for finite populations. J. Am. Stat. Assoc., 89, 1282–1289.
- Boteman, S.L., Massey, J.T., and Shimizu, I.M. (1982). Effect of weighting adjustments on estimates from a random-digit-dialed telephone survey. In *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 139–144.
- Brackstone, G.J. (1998). National Longitudinal Survey of Children and Youth. *Surv. Stat.*, **39**, (13), International Statistical Institute.
- Brackstone, G.J. and Rao, J.N.K. (1976). Raking ratio estimators, *Surv. Methodol.*, **2.** 63–69.
- Brewer, K.R.W. (1963). Ratio estimation in finite populations. Some results deducible from the assumption of an underlying stochastic process. *Aust. J. Stat.*, **5**(3), 93–105.
- Brewer, K.R.W. and Hanif, M. (1983). Sampling with Unequal Probabilities. Springer-Verlag, New York.
- Brown, J.J., Diamond, I.D., Chambers, R.L., Buckner, L.J. and Teague, A.D. (1999). J. R. Stat. Soc., A162(2), 247–267.
- Brown, P.J., Firth, D., and Payne, C.D. (1999). Forecasting on British Election Night 1997. J. R. Stat. Soc., A162(2), 211–226.
- Buck, S.F. (1960). A method of estimation of missing values in multivariate data suitable for use with an electronic computer. J. R. Stat. Soc., **B22**, 302–306.
- Calvin, J.A. and Sedransk, J. (1991). Bayesian and frequentist predictive inference for the patterns of care studies. J. Am. Stat. Assoc., 86, 36–48.
- Carfanga, E. (1997). Correlograms and sample designs in agriculture. *Bull. Int. Stat. Inst.*, 51(1), 5–6.
- Casady, R.J. and Valliant, R. (1993). Conditional properties of post-stratified estimators under normal theory. Surv. Methodol., 19, 183–192.

- Cassel, C.M., Särndal, C.E., and Wretman, J.H. (1976). Some results on generalized difference estimation and generalized regression estimation for finite populations. *Biometrika*, 63, 615–620.
- Cassel, C.M., Särndal, C.E., and Wretman, J.H. (1977). Foundations of Inference in Survey Sampling. John Wiley & Sons, New York.
- Cassel, C.M., Särndal, C.E., and Wretman, J.H. (1983). Some uses of statistical models in connection with the nonresponse problem. In *Incomplete Data* in Sample Surveys, Vol. 3, W.G. Madow and I. Olkin, Eds., Academic Press, New York.
- Chapman, D.W., Bailey, L., and Kasprzyk, D. (1986). Nonresponse adjustment procedures at the U.S. Bureau of the Census. *Surv. Methodol.*, **12**, 161–179.
- Chatterjee, S. (1968). Multivariate stratified surveys. J. Am. Stat. Assoc., 63, 530–534.
- Chiu, H.Y. and Sedransk, J. (1986). A Bayesian procedure for imputing missing values in sample surveys. J. Am. Stat. Assoc., 81, 667–676.
- Citro, C.F., Cohen, M.L., and Kalton, G., Eds. (1998), Small-Area Estimates of School-Age Children in Poverty. National Academy Press, Washington, D.C.
- Cochran, W.G. (1942). Sampling theory when the sampling units are of unequal sizes. J. Am. Stat. Assoc., 37, 199–212.
- Cochran, W.G. (1946). Relative accuracy of systematic and stratified random samples for a certain class of populations. *Ann. Math. Stat.*, **17**, 164–177.
- Cochran (1961). Comparison of methods for stratum boundaries. *Bull. Int. Stat. Inst.*, 38(2), 345–358.
- Cochran, W.G. (1977). Sampling Techniques. John Wiley & Sons, New York.
- Cochran, W.G. (1983). Historical perspective. In *Incomplete Data in Sample Surveys*, Vol. 2, W. G. Madow, I. Olkin, and B. Rubin, Eds., Academic Press, New York, 11–25.
- Cohen, S.B. and Braden, J.J. (1993). Alternative options for state level estimates in the National Medical Expenditure Survey. Proceedings of the Survey Research Methods Section, American Statistical Association, Washington, D.C., 364–369.
- Collins, M. (1999). Sampling for U.K. telephone surveys. J. R. Stat. Soc., A162(1), 1–4.
- Conaway, M.R. (1992). The analysis of repeated categorical measurements subject to nonignorable nonresponse. J. Am. Stat. Assoc., 87, 817–824.
- Cressie, N. (1989). Empirical Bayes estimation of undercount in the Decennial Census. J. Am. Stat. Assoc., 84, 1033–1044.
- Cressie, N. (1992). REML estimation in empirical Bayes smoothing of census undercount. *Surv. Methodol.*, **18**, 75–94.
- Dalenius, T. and Hodges, J.L., Jr. (1959). Minimum variance stratification. J. Am. Stat. Assoc., 54, 88–101.
- Datta, G.S., Ghosh, M., Huang, E., Isaki, C.T., Schltz, L.K., and Tsay, J.H. (1992). Hierarchical and empirical Bayes methods for adjustment of census undercount: the 1980 Missouri dress rehearsal data. Surv. Methodol., 18, 95–108.

- Deming, W.E. (1953). On a probability mechanism to attain an economic balance between the resultant error of nonresponse and the bias of nonresponse. *J. Am. Stat. Assoc.*, **48**, 743–772.
- Dempster, A.P. and Raghunathan, T.E. (1987). Using covariates for small area estimation: a common sense Bayesian approach. In *Small Area Statistics*, R. Platek, J.N.K. Rao, C.E. Särndal, and M.P. Singh, Eds., John Wiley & Sons, New York.
- Des Raj (1968). Sampling Theory. McGraw-Hill, New York.
- Deville, J.-C. and Särndal, C.E. (1992). Calibration estimator in survey sampling. J. Am. Stat. Assoc., 87, 376–382.
- Dillman, D. (1978). Mail and Telephone Surveys. John Wiley & Sons, New York.
- Ding, Y. and Fienberg, S.E. (1994). Dual system estimation of census undercount in the presence of matching error. *Surv. Methodol.*, **20**, 149–158.
- Dorfman, A.H. (1994). A note on variance estimation for the regression estimator in double sampling. J. Am. Stat. Assoc., 89, 137-140.
- Drew, J.D., Singh, M.P., and Choudhry, G.H. (1982). Evaluation of small area techniques for the Canadian Labor Force Survey. Surv. Methodol., 8, 17–47.
- Dumicic', K. and Dumicic', S. (1999). The sample strategy for an UNICEF survey in Croatia in 1996. *Proc. Int. Stat. Inst.*, **D**, 287–288.
- Duncan, G.J. and Kalton, G. (1987). Issues of design and analysis of surveys across time. *Int. Stat. Rev.*, **55**, 97–117.
- Durbin, J. (1959). A note on the application of Quenouille's method of bias reduction to the estimation of ratios. *Biometrika*, **46**, 477–480.
- Durbin, J. (1967). Design of multi-stage surveys for the estimation of sampling errors. *Appl. Stat.*, **16**, 152–164.
- Dutka, S. and Frankel, L.R. (1995). Probability sampling for marketing research surveys in 56 countries. *Proc. Int. Assoc. Survey Statisticians*, 97–117.
- Edler, L., Pilz, L.R., and Potschke-Langer, M. (1999). On the prevalence of smoking among young school children and its association with risky behaviour and health risks. *Proc. Int. Stat. Inst.*, **E**, 293–294.
- Efron, B. (1982). The Jackknife, the Bootstrap and Other Resampling Plans, Society for Industrial and Applied Mathematics, Philadelphia.
- Efron, B. (1994). Missing data, imputation and the bootstrap. J. Am. Stat. Assoc., 89, 463–479.
- Efron, B. and Tibshirani, R.J. (1993). An Introduction to the Bootstrap. Chapman & Hall, New York.
- Ekman, G. (1959). An approximation used in univariate stratification. *Ann. Math. Stat.*, **30**, 219–229.
- Ericksen, E.P. (1974). A regression method for estimating populations of local areas. J. Am. Stat. Assoc., 69, 867–875.
- Ericksen, E.P. and Kadane, J.B. (1985). Estimating the population in a census year (with comments and rejoinder). J. Am. Stat. Assoc., 80, 98–131.
- Ericksen, E.P., Kadane, J.B., and Tukey, J.W. (1989). Adjusting the 1980 census of population and housing. J. Am. Stat. Assoc., 84, 927–944.
- Ericson, W.A. (1967). Optimal sample design with nonresponse. J. Am. Stat. Assoc., 69, 63–78.

- Ericson, W.A. (1969). Subjective Bayesian models in sampling finite populations. J. R. Stat. Soc., B31, 195–233.
- Ernst, L.R. (1978). Weighting to Adjust for Partial Nonresponse. In *Proceedings of the Social Statistics Section*, American Statistical Association, Washington, D.C., 468–473.
- Ernst, L.R. (1980). Variance of the estimated mean for several imputation procedures. In *Proceedings of the Social Statistics Section*, American Statistical Association, Washington, D.C., 716–720.
- Falrosi, P.D., Falrosi, S., and Russo, A. (1994). Empirical comparison of small area estimation methods for the Italian Labor Force Survey. Surv. Methodol., 20, 171–176.
- Fay, R.E. (1986). Causal models for patterns of nonresponse. J. Am. Stat. Assoc., 81, 354–365.
- Fay, R.E. (1996). Alternative paradigms for the analysis of imputed survey data. J. Am. Stat. Assoc., 91, 480–490.
- Fay, R.E. and Harriet, R.A. (1979). Estimates of income for small places: an application of James-Stein procedures to census data. *J. Am. Stat. Assoc.*, **74**, 269–277.
- Fay, R.E. and Train, G.F. (1995). Aspects of survey and model-based postcensal estimation of income and poverty characteristics for states and counties. *Proceedings of the Section of Government Statistics*, American Statistical Association, Washington, D.C.
- Fellegi, I. (1963). Sampling with varying probabilities without replacement: rotating and non-rotating samples. J. Am. Stat. Assoc., 58, 183–201.
- Fellegi, I.P. and Holt, D. (1976). A systematic approach to automatic edit and imputation. J. Am. Stat. Assoc., 71, 17–35.
- Ferranti, M.R. and Pacei, S. (1997). Small area estimation of agricultural production. The Italian Survey on Farms. *Bull. Int. Stat. Inst.*, **LVII**(1), 511–512.
- Fieller, E.C. (1932). The distribution of the index in a normal bivariate population, *Biometrika*, **24**, 428–440.
- Fienberg, S.E. (1992). Bibliography on capture-recapture modeling with application to census undercount adjustment. *Surv. Methodol.*, **18**, 143–154.
- Fisher, R. and Siegel, (1997). Methods used for small area poverty and income estimation. *Proceedings of the Social Statistics Section*, American Statistical Association, Washington, D.C.
- Fuller, W.A. and Isaki, C.T. (1981). Survey design under superpopulation models. In *Current Topics in Survey Sampling*, D. Krewski, J.N.K. Rao, and R. Platek, Eds., Academic Press, New York, 199–226.
- Fuller, W.A., Loughlin, M.E., and Baker, H.D. (1994). Regression weighting in the presence of nonresponse with application to the 1987–1988 Nationwide Food Consumption Survey. *Surv. Methodol.*, **20**, 75–85.
- Gelman, A., Carlin, J.B., Stern, H.S., and Rubin, D.B. (1995). *Bayesian Data Analysis*. Chapman & Hall/CRC Press, New York.
- Gelman, A., King, G., and Liu, C. (1998). Not asked and not answered: multiple imputation for multiple surveys. *J. Am. Stat. Assoc.*, **93**, 846–857.

- Ghosh, M. and Lahiri, P. (1987). Robust Empirical Bayes estimation of variances from stratified samples. Sankhya, **B49**, 78–89.
- Ghosh, M. and Meeden, G. (1986). Empirical Bayes' estimation in finite populations. J. Am. Stat. Assoc., 81, 1058–1062.
- Ghosh, M. and Rao, J.N.K. (1994). Small area estimation: an appraisal. *Stat. Sci.*, 8, 76–80.
- Giles, P. (1988). A model for generalized edit and imputation of survey data. *Can. J. Stat.*, **16S**, 57–73.
- Glynn, R.J., Laird, N.M., and Rubin, D.B. (1993). Multiple imputation in mixture models for nonignorable nonresponse with follow-ups. *J. Am. Stat. Assoc.*, **88**, 984–993.
- Godambe, V.P. (1955). A unified theory of sampling from finite population. J. R. Stat. Soc., **B17**, 269–278
- Godambe, V.P. (1966). A new approach to sampling from finite populations I,II. J. R. Stat. Soc. **B28**(2), 310–328.
- Godambe, V.P. and Thompson, M.E. (1986). Some optimality results in the presence of nonresponse. *Surv. Methodol.*, **12**, 29–36 (correction, **13**, 123).
- Gonzalez, M.E. (1973). Use and evaluation of synthetic estimates. In *Proceedings* of the Social Sciences Section, American Statistical Association, Washington, D.C., 33–36.
- Gover, A.R. (1979). Nonresponse in the Canadian Labour Force Survey. *Surv. Methodol.*, **5**, 29–58.
- Griffith, J.E. and Frase, M.J. (1995). Longitudinal studies in the United States: tracking students to understand educational progress. *Bull. Int. Stat. Inst.*, 50th Session, LVI(3), 1035–1052.
- Gross, S. (1980). Median estimation in sample surveys. In *Proceedings of the Section on Survey Research Methods*, American Statistical Association, Washington, D.C., 181–184.
- Groves, R.M. and Nicholls, W.L., II (1986). The status of computer-assisted telephone interviewing (1986): Part II—Data quality issues. *J. Official Stat.*, 2, 117–134.
- Groves, R.M., Biemer, P.P., Lyberg, L.E., Massey, J.T., Nicholls, W.L., and Waksberg, J., Eds. (1988), *Telephone Survey Methodology*, John Wiley & Sons, New York.
- Gurney, M. and Jewett, R.S. (1975). Constructing orthogonal replications for variance estimation. J. Am. Stat. Assoc., 70, 819–821.
- Hanif, M. and Brewer, K.R.W. (1980). Sampling with unequal probabilities without replacement: a review. *Int. Stat. Rev.*, **48**, 317–335.
- Hansen, M.H. and Hurwitz, W.N. (1946). The problem of nonresponse in sample surveys. J. Am. Stat. Assoc., 41, 517–529.
- Hansen, M.H., Hurwitz, W.N. and Gurney, M. (1946). Problems and methods of the sample survey of business. J. Am. Stat. Assoc., 41, 173–189.
- Hartley, H.O. and Ross, A. (1954). Unbiased ratio estimates. *Nature*, 174, 270–271.

- Heitjan, D.F. and Little, R.J.A. (1988). Multiple imputation for the fatal accident system. In *Proceedings of the Section on Survey Research Methods*, American Statistical Association, Washington, D.C., 93–102.
- Hendricks, W.A. (1949). Adjustment for bias by nonresponse in mailed surveys. *Agric. Econ. Res.*, **1**, 52–56.
- Herzog, T.N. and Rubin, D.B. (1983). Using multiple imputations to handle nonresponse in sample surveys. In *Incomplete Data in Sample Surveys*, Vol. 2, W. G. Madow, I. Olkin, and D.B. Rubin, Eds., Academic Press, New York, 210–245.
- Hidiroglou, M.A. and Särndal, C.E. (1985). An empirical study of some regression estimators for small domains. *Surv. Methodol.*, **11**, 65–77.
- Hogan, H. (1993). The 1990 post-enumeration survey: operations and results. J. Am. Stat. Assoc., 88, 1047–1060.
- Holt, D. and Holmes, D.J. (1994). Small domain estimation for unequal probability survey designs. *Surv. Methodol.*, **20**, 23–31.
- Holt, D., Smith, T.M.F., and Tomberlin, T.J. (1979). A model-based approach to estimation for small subgroups of a population. J. Am. Stat. Assoc., 74, 405–410.
- Holt, D., Smith, T.M.F., and Winter, P.O. (1980). Regression analysis of data from complex surveys. J. R. Stat. Soc., A143, 474–487.
- Horvitz, D.G. and Thompson, D.J. (1952). A generalization of sampling without replacement from a finite universe, J. Am. Stat. Assoc., 47, 663–685.
- Iachan, R. and Dennis, M.L. (1993). A multiple frame approach to sampling the homeless and transient population. *J. Official Stat.*, **9**, 747–764.
- Isaki, C.T. and Fuller, W.A. (1982). Survey design under the regression superpopulation model, *J. Am. Stat. Assoc.*, **77**, 89–96.
- Isaki, C.T., Schultz, L.K., Smith, P.J. and Diffendal, G.J. (1987). Small area estimation research for census undercount-Progress report. In, *Small Area Statistics*, R. Platek, J.N.K. Rao, C.E. Sarndal and M.P. Singh, Eds., John Wiley and Sons, New York, 219–238.
- Jackson, J.E. and Rao, P.S.R.S. (1983). Estimation procedures in the presence of nonresponse. In *Proceedings of the Section on Survey Research Methods*, American Statistical Association, Washington, D.C., 273–276.
- Jacobs, E., Jacobs, C., and Dippo, C. (1989). The U.S. Consumer Expenditure Survey. *Bull. Int. Stat. Inst.*, **LIII**(2), 123–142.
- Jagers, P. (1986). Post-stratification against bias in sampling. *Int. Stat. Rev.*, **54**, 159–167.
- Jones, H.L. (1974). Jackknife estimation of functions of stratum means. *Biometrika*, **61**, 343–348.
- Kadane, J.B. (1993). Subjective Bayesian analysis for surveys with missing data. *Statistician*, **42**, 415–426.
- Kalton, G. and Kasprzyk, D. (1986). The treatment of missing survey data. Surv. Methodol., 12, 1–16.
- Kalton, G. and Kish, L. (1984). Some efficient random imputation methods. *Commun. Stat.*, **A13**(16), 1919–1940.

- Katzoff, M.J., Jones, G.K., Curtin, L.R., and Graubard, B. (1989). Two empirical studies of statistical methods applied to data from complex surveys. In *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 757–762.
- Kaufman, G.H. and King, B. (1973). A Bayesian analysis of nonresponse in dichotomous process. J. Am. Stat. Assoc., 68, 670–678.
- Kish, L. (1965). Survey Sampling. John Wiley & Sons, New York.
- Kish, L. and Frankel, M.R. (1974). Inference from complex samples. J. R. Stat. Soc., **B36**, 1–37.
- Kott, P.S. (1990a). Survey Processing System (SRS) Summary. National Agricultural Statistics Service (NASS) Staff Report, No. SRB-90-08.
- Kott, P.S. (1994b). A note on handling nonresponse in sample surveys. *J. Am. Stat. Assoc.*, **89**, 693–696.
- Kott, P.S. (1994c). Reweighting and variance estimation for the characteristics of business owners survey. J. Official Stat., 10, 407–418.
- Kovar, J.G., Rao, J.N.K., and Wu, C.F.J. (1988). Bootstrap and other methods to measure errors in survey estimates. *Can. J. Stat.*, **16**, 25–45.
- Krewski, D. and Chakrabarti, R.P. (1981). On the stability of the jackknife variance estimator in ratio estimation. J. Stat. Planning Inference, 5, 71–79.
- Krewski, D. and Rao, J.N.K. (1981). Inference from stratified samples: properties of the linearization, jackknife and balanced repeated replication methods. *Ann. Stat.*, **9**, 1010–1019.
- Lahiri, D.B. (1951). A method of sample selection providing unbiased ratio estimates. *Bull. Int. Stat. Inst.*, **33**(2), 133–140.
- Lahiri, P. and Rao, J.N.K. (1995). Robust estimation of mean square error of small area estimation. *J. Am. Stat. Assoc.*, **90**(430), 758–766.
- Lehtonen, R. and Veijanen, A. (1999). Multilevel-model assisted generalized regression estimators for domain estimation. *Proc. Int. Stat. Inst.*, L, 227–228.
- Lehtonen, R. and Pahkinen, E.J. (1995). Practical Methods for Design and Analysis of Complex Surveys. John Wiley and Sons, New York.
- Lemeshow, S. and Levy, P. (1978). Estimating the variances of the ratio estimates in complex surveys with two primary units per stratum—a comparison of balanced replication and jackknife techniques. *J. Stat. Comp. and Simul.*, **8**, 191–205.
- Lessler, J.T. and Kalsbeek, W.D. (1992). *Nonsampling Errors in Surveys*. John Wiley & Sons, New York.
- Liao, H. and Sedransk, J. (1983). Selection of strata sample sizes for the comparison of domain means. J. Am. Stat. Assoc., 78, 870–878.
- Lipsitz, S.R., Laird, N.M., and Harrington, D.P. (1994). Weighted least squares analysis of repeated categorical measurements with outcomes subject to nonresponse. *Biometrics*, **50**, 1102–1116.
- Little, R.J.A. (1982). Models for nonresponse in sample surveys. J. Am. Stat. Assoc., 77, 237–250.
- Little, R.J.A. (1986). Survey nonresponse adjustment for estimates of means. *Int. Stat. Rev.*, **54**(2), 139–157.

- Little, R.J.A. (1995). Modelling the drop-out mechanism in repeated measures studies. J. Am. Stat. Assoc., 90, 1112–1121.
- Little, R.J.A. and Rubin, D.B. (1987). Statistical Analysis with Missing Data. John Wiley & Sons, New York.
- Lohr, S.L. and Rao, J.N.K. (2000). Inference from dual frame surveys. *J. Am. Stat. Assoc.*, **95**(449), 271–280, 1645–1667.
- Longford, N.T. (1999). Multivariate shrinkage estimation of small area means and proportions. J. R. Stat. Soc., A162(2), 227–246.
- Lundstrom, S. (1987). An evaluation of small area estimation methods. The case of estimating the number of unmarried cohabiting persons in Swedish municipalities. In *Small Area Statistics*, R. Platek, J.N.K. Rao, C.E. Särndal, and M. P. Singh, Eds., John Wiley & Sons, New York.
- Madow, W.G. and Madow, L.H. (1944). On the theory of systematic sampling. *Ann. Math. Stat.*, **15**, 1–24.
- Mahalanobis, P.C. (1944). On large-scale sample surveys. *Philos. Trans. R. Stat. Soc.*, **B231**, 329–451.
- Mahalanobis, P.C. (1946). Recent experiments in statistical sampling in the Indian Statistical Institute. J. R. Stat. Soc., 109, 325–370.
- Malec, D. and Sedransk, J. (1985). Bayesian inference for finite population parameters in multistage cluster sampling. J. Am. Stat. Assoc., 80, 897–902.
- Malec, D., Sedransk, J., Moriarity, C.L., and LeClere, F.B. (1997). Small area inference for binary variables in the National Health Interview Survey. J. Am. Stat. Assoc., 92, 815–826.
- Marker, D.A. (1993). Small area estimation for the U.S. National Health Interview Survey. *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 11–20.
- Martin, J., O'Muircheartaigh, C., and Curtice, J. (1993). The use of CAPI for attitude surveys: an experimental comparison with traditional methods. *J. Official Stat.*, **9**, 641–661.
- Massey, J.T., Moore, T.F., Parsons, V.L., and Tadros, W. (1989). Design and Estimation for the National Health Interview Survey, 1985–94. Vital and Health Statistics, Series 2, No. 110. DHHS Publication No. PHS 89–1384. Public Health Service, U.S. Government Printing Office, Washington, D.C.
- McCarthy, P.J. (1966). Replication: An Approach to the Analysis of Data from Complex Surveys. National Center for Health Statistics, Washington, D.C., Series 2, 14.
- McCarthy, P.J. (1969). Pseudoreplication: half-samples. Rev. Int. Stat. Inst., 37, 239–264.
- McCarthy, P.J. and Snowden, C.B. (1985). The Bootstrap and Finite Population Sampling. Vital and Health Statistics, Series 2 (95), Public Health Service Publication 85–1369, U.S. Government Printing Office, Washington, D.C.
- Midzuno, H. (1951). On the sampling system with probability proportionate to sum of sizes. *Ann. Inst. Stat. Math.*, **2**, 99–108.

- Mosteller, C.F., Hyman, H., McCarthy, P., Marks, E.S., and Truman, D.B. (1949). The Pre-election Polls of 1948, Bull. 60, Social and Scientific Research Council, New York.
- Murthy, M.N. (1957). Ordered and unordered estimators in sampling without replacement. *Sankhya*, **18**, 379–390.
- Murthy, M.N. (1967). Sampling Theory and Methods. Statistical Publishing Society, Calcutta, India.
- Narain, R.D. (1951). On sampling without replacement with varying probabilities. J. Ind. Soc. Agri. Stat., 3, 169–174.
- Narain, P. and Srivastava, A.K. (1995). Census and survey issues in Indian Agricultural Census. In *Proceedings of the International Association of Survey Statisticians*, International Statistical Institute, 229–239.
- Nathan, G. (1988). Inference based on data from complex sample designs. In *Handbook of Statistics*, Vol. **6**, P.R. Krishnaiah and C.R. Rao, Eds., North Holland, New York, 247–266.
- Neyman, J. (1934). On the two different aspects of the representative sampling and the method of purposive selection. *J. R. Stat. Soc.*, **97**, 558–606.
- Neyman, J. (1938). Contribution to the theory of sampling human populations. J. Am. Stat. Assoc., 33, 101–116.
- Nordberg, L. (1989). Generalized linear modeling of sample survey data. *J. Official Stat.*, **5**, 223–239.
- Oh, H.L. and Scheuren, F.J. (1983). Weighting adjustment for nonresponse, In *Incomplete Data in Sample Surveys*, Vol. 2, W.G. Madow, I. Olkin, and B. Rubin, Eds., Academic Press, New York, 185–206.
- Oh, H.L. and Scheuren, F.J. (1987). Modified raking ratio estimator, *Surv. Methodol.*, **13**, 209–219.
- Olkin, I. (1958). Multivariate ratio method of estimation for finite populations, *Biometrika*, **45**, 154–165.
- O'Muircheartaigh, C.A. (1977). Proximum designs for crude sampling frames. In *Proceedings of the 41st Session*, International Statistical Institute, **57**, 82–100.
- Pathak, P.K. (1962) On sampling with unequal probability sampling. Sankhya, A24, 315–326.
- Pfeffermann, D. and Burck, l. (1990). Robust small area estimation combining time series and cross-sectional data. *Surv. Methodol.*, **16**, 217–237.
- Pfeffermann, D. and Nathan, G. (1985). Problems in model selection identification based on data from complex surveys. *Bull. Int. Stat. Inst.*, **LI**(2), 12.2, 1–18.
- Platek, R. and Gray, B.G. (1983). Imputation methodology: total survey error. In *Incomplete Data in Sample Surveys*, W.G. Madow, I. Olkin, and D.B. Rubin, Eds., Academic Press, New York, 247–333.
- Politz, A. and Simmons, W. (1949). An attempt to get the "not at home"s into the sample without callbacks. J. Am. Stat. Assoc., 44, 9–31.
- Potthoff, R.F., Manton, K., and Woodbury, M.A. (1993). Correcting for nonavailability bias in surveys with follow-ups. J. Am. Stat. Assoc., 88, 1197–1207.

- Prasad, N.G.N. and Rao, J.N.K. (1990). The estimation of the mean square error of small-area estimators. *J. Am. Stat. Assoc.*, **85**, 163–171.
- Purcell, N.J. and Kish, L. (1980). Postcensal estimates for local areas (or domains). Int. Stat. Rev., 48, 3–18.
- Quenouille, M.H. (1956). Notes on bias in estimation. Biometrika, 43, 353-360.
- Raghunathan, T.E. and Grizzle, J.E. (1995). A split questionnaire survey design. J. Am. Stat. Assoc., 90, 55-63.
- Rancourt, E., Lee, H. and Sarndal, C.E. (1994). Bias corrections for survey estimates from data with ratio imputed values for confounded nonresponse. *Surv. Methodol.*, **20**, 137–147.
- Rao, C.R., Pathak, P.K., and Koltchinski, V.I. (1997). Bootstrap by sequential sampling. *J. Stat. Planning and Inference*, **64**, 257–281.
- Rao, J.N.K. (1965). On two simple schemes of unequal probability sampling without replacement. *J. Indian Stat. Assoc.*, **3**, 173–180.
- Rao, J.N.K. (1973). On double sampling for stratification and analytical surveys. *Biometrika*, **60**, 125–133 (correction, **60**, 669).
- Rao, J.N.K. (1996). On variance estimation with imputed survey data. *J. Am. Stat. Assoc.*, **91**, 499–505.
- Rao, J.N.K. and Bayless, D.L. (1969). An empirical study of the stabilities of estimators and variance estimators in unequal probability sampling of two units per stratum. *J. Am. Stat. Assoc.*, **64**, 540–559.
- Rao, J.N.K. and Ghangurde, P.D. (1972). Bayesian optimization in sampling finite populations. *J. Am. Stat. Assoc.*, **67**, 539–553.
- Rao, J.N.K. and Scott, A.J. (1981). The analysis of categorical data from complex surveys: chi-squared tests for goodness of fit and independence in two way table. *J. Am. Stat. Assoc.*, **76**, 221–230.
- 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 Webster, J.T. (1966). On two methods of bias reduction in the estimation of ratios. *Biometrika*, **53**, 571–577.
- Rao, J.N.K. and Wu, C.F.J. (1985). Inference from stratified samples: Second-order analysis of three methods for nonlinear statistics *J. Am. Stat. Assoc.*, **80**, 620–630.
- Rao, J.N.K. and Wu, C.F.J. (1988). Resampling inference with complex survey data, J. Am. Stat. Assoc., 83, 231–241.
- Rao, J.N.K. and Yu, M. (1992). Small area estimation by combining time series and cross-sectional data. *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 1–9.
- Rao, J.N.K., Hartley, H.O., and Cochran, W.G. (1962). A simple procedure of unequal probability sampling without replacement. J. R. Stat. Soc., B24, 482–491.
- Rao, J.N.K., Wu, C.F.J., and Yue, K. (1992). Some recent work on resampling methods for complex surveys. *Surv. Methodol.*, **18**, 209–217.
- Rao, P.S.R.S. (1968). On three procedures of sampling from finite populations. *Biometrika*, **55**, 438–440.

- Rao, P.S.R.S. (1969). Comparison of four ratio-type estimates. J. Am. Stat. Assoc., 64, 574–580.
- Rao, P.S.R.S. (1972). On two phase regression estimators. Sankhya, A33, 473–476.
- Rao, P.S.R.S. (1974). Jackknifing the ratio estimator. Sankhya, C36, 84-97.
- Rao, P.S.R.S. (1975a). Hartley-Ross type estimator with two phase sampling, *Sankhya*, **C37**, 140–146.
- Rao, P.S.R.S. (1975b). On the two-phase ratio estimator in finite populations. J. Am. Stat. Assoc., 70, 839–845.
- Rao, P.S.R.S. (1979). On applying the jackknife procedure to the ratio estimator. Sankhya, C41, 115–126.
- Rao, P.S.R.S. (1981a). Efficiencies of nine two-phase ratio estimators for the mean. J. Am. Stat. Assoc., 76, 434–442.
- Rao, P.S.R.S. (1981b). Estimation of the mean square error of the ratio estimator. In *Current Topics in Survey Sampling*, D. Krewski, R. Platek, and J.N.K. Rao, Eds., Academic Press, New York, 305–315.
- Rao, P.S.R.S. (1983a). Randomization approach. In *Incomplete Data in Sample Surveys*, Vol. 2, W.G. Madow, I. Olkin, and D.B. Rubin, Eds., Academic Press, New York, 97–105.
- Rao, P.S.R.S. (1983b). Hansen-Hurwitz method for subsampling the nonrespondents. In *Encyclopedia of Statistical Sciences*, Vol. 3, S. Kotz and N.L. Johnson, Eds., John Wiley & Sons, New York, 573–574.
- Rao, P.S.R.S. (1983c). Callbacks, follow-ups and repeated telephone calls. In Incomplete Data in Sample Surveys, Vol. 2, W.G. Madow, I. Olkin, and D.B. Rubin, Eds., Academic Press, New York, 33–44.
- Rao, P.S.R.S. (1986). Ratio estimation with subsampling the nonrespondents. Surv. Methodol., 12(2), 217–230.
- Rao, P.S.R.S. (1987). Ratio and regression estimators. Handbook of Statistics, Vol. 6, P. Krishnaiah and C.R. Rao, Eds., Academic Press, New York, 449–468.
- Rao, P.S.R.S. (1990). Regression estimators with subsampling the nonrespondents. In *Theory and Pragmatics of Data Quality Control*, G.E. Liepins and V.R.R. Uppuluri, Eds., Marcel Dekker, New York, 191–208.
- Rao, P.S.R.S. (1991). Ratio estimators with unequal probability sampling. *Bull. Int. Stat. Inst.*, 48(2), 542–543.
- Rao, P.S.R.S. (1997). Variance Components Estimation: Mixed Models, Methodologies and Applications. Chapman & Hall/CRC Press, Boca Raton, FL.
- Rao, P.S.R.S. (1998a). Ratio estimators (update). In *Encyclopedia of Statistical Sciences*, Update Vol. 2, S. Kotz, C.B. Read, and D.L. Banks, Eds., John Wiley & Sons, New York, 570–575.
- Rao, P.S.R.S. (1998b). Double Sampling. In *Encyclopedia of Biostatistics*, P. Armitage and T. Colton, Eds., John Wiley & Sons, New York.
- Rao, P.S.R.S. and Katzoff, M.J. (1996). Bootstrap for finite populations. *Commun. Stat. Simulation Computation*, **25**(4), 979–994.
- Rao, P.S.R.S. and Rao, J.N.K. (1971). Small sample results for ratio estimators, *Biometrika*, **58**, 625–630.

- Royall, R.M. (1970). On the finite population sampling theory under certain linear regression models, *Biometrika*, **57**, 377–387.
- Royall, R.M. (1976). The linear least-squares prediction approach to two-stage sampling. J. Am. Stat. Assoc., 71, 657–664 (correction, 74, 516).
- Royall, R.M. (1986). The prediction approach to robust variance estimation to two-stage cluster sampling. J. Am. Stat. Assoc., 81, 119–123.
- Rubin, D.B. (1978). Multiple imputations in sample surveys—a phenomenological Bayesian approach to nonresponse. In *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 20–34.
- Rubin, D.B. (1979). Illustrating the use of multiple imputation to handle nonresponse in sample surveys. *Bull. Int. Stat. Inst.*, **48**(2), 517–532.
- Rubin, D.B. (1986). Basic ideas of multiple imputation for nonresponse. *Surv. Methodol.*, **12**, 37–47.
- Rubin, D.B. (1987). Multiple Imputation for Nonresponse in Surveys. John Wiley & Sons, New York.
- Rubin, D.B. (1996). Multiple imputation after 18+ years. *J. Am. Stat. Assoc.*, **91**, 507–510.
- Rubin, D.B. and Schenker, N. (1986). Multiple imputation for interval estimation from simple random samples with ignorable nonresponse. *J. Am. Stat. Assoc.*, **81**, 366–374.
- Rubin, D.B., Schafer, J.L., and Schenker, N. (1988). Imputation strategies for missing values in postenumeration surveys. *Surv. Methodol.*, **14**, 209–221.
- Samford, M.R. (1967). On sampling without replacement with unequal probabilities of selection. *Biometrika*, **54**, 499–513.
- Santos, E. (1995). Retail trading surveys in Latin America. *Bull. Int. Stat. Inst.*, LVI(3), 889–903.
- Sarndal, C.E. (1984). Design consistent versus model dependent estimation for small domains. J. Am. Stat. Assoc., 79, 624-631.
- Särndal, C.E. (1986). A regression approach to estimation in the presence of nonresponse. *Surv. Methodol.*, **12**, 207–215.
- Särndal, C.E. and Hidiroglou, M.A. (1989). Small domain estimation: a conditional analysis, *J. Am. Stat. Assoc.*, **84**, 266–275.
- Särndal, C.E. and Swensson, B. (1985). Incorporating nonresponse modelling in a general randomization theory approach. *Proc. Int. Stat. Inst.*, 45th session.
- Särndal, C.E., Swensson, B., and Wretman, J. (1992). *Model Assisted Survey Sampling*. Springer-Verlag, New York.
- Schafer, J.L. (1997). Analysis of Incomplete Multivariate Data, Chapman & Hall, London.
- Schafer, J.L. and Schenker, N. (2000). Inference with imputed conditional mean. J. Am. Stat. Assoc., 95, 144–154.
- Schaible, W.L., Brock, D.B., and Schank, G.A. (1977). An empirical comparison of the simple inflation, synthetic and composite estimators for small area statistics. In *Proceedings of the Social Statistics Section*, American Statistical Association, Washington, D.C., 1017–1021.

- Schucany, W.R., Gray, H.L., and Owen, D.B. (1971). On bias reduction in estimation. J. Am. Stat. Assoc., 66, 524–533.
- Sedransk, J. (1965). A double sampling scheme for analytical surveys. J. Am. Stat. Assoc., 60, 985–1004.
- Sedransk, J. (1967). Designing some multi-factor analytical studies. J. Am. Stat. Assoc., 62, 1121–1139.
- Sen, A.R. (1953). On the estimate of variance in sampling with varying probabilities. J. Indian Soc. Agric. Stat., 5, 119–127.
- Shah, B.V., Holt, M.M., and Folsom, R.E. (1977). Inference about regression models from sample survey data. *Bull. Int. Stat. Inst.*, **47**, 43–57.
- Shao, J. and Sitter, R.R. (1996). Bootstrap for imputed survey data. J. Am. Stat. Assoc., 91, 1278–1288.
- Shao, J. and Steel, P. (1999). Variance estimation for survey data with composite imputation and nonnegligible sampling fraction. *J. Am. Stat. Assoc.*, **94**(445), 254–265.
- Shao, J. and Tu, D. (1995). *The Jackknife and the Bootstrap*. Springer-Verlag, New York.
- Simmons, W.R. (1954). A plan to account for "not-at-homes" by combining weighting and callbacks. *J. Marketing*, **11**, 42–53.
- Sirken, M.G. (1983). Handling missing data by network sampling. In *Incomplete Data in Sample Surveys*, Vol. 2, W.G. Madow, I. Olkin, and D.B. Rubin, Eds., Academic Press, New York, 81–89.
- Sirken, M.G. and Casady, R.J. (1982). Nonresponse in dual frame surveys based on area; list and telephone frames. in *Proceedings of the Survey Research Methods Section*, American Statistical Association, Washington, D.C., 151–153.
- Sitter, R.R. (1992). Resampling procedure for complex survey data. J. Am. Stat. Assoc., 87, 755–765.
- Sitter, R.R. (1997). Variance estimation for the regression estimator in twophase sampling. J. Am. Stat. Assoc., **92**(438), 780–787.
- Skinner, C.J. and Rao, J.N.K. (1996). Estimation in dual frame surveys with complex designs. J. Am. Stat. Assoc., 91, 349–356.
- Skinner, C.J., Holt, D., and Smith, T.M.F., Eds. (1989). *Analysis of Complex Survey Data*. John Wiley & Sons, New York.
- Smouse, E.P. (1982). Bayesian estimation of a finite population total using auxiliary information in the presence of nonresponse. *J. Am. Stat. Assoc.*, **77**, 97–102.
- Srinath, K.P. (1971). Multiphase sampling in nonresponse problems. J. Am. Stat. Assoc., 66, 583–586.
- Stasny, E.A. (1986). Estimating gross flows using panel data with nonresponse. An example from the Canadian Labor Force Survey. *J. Am. Stat. Assoc.*, **81**, 42–47.
- Stasny, E.A. (1987). Some Morkov-chain models for nonresponse in estimating gross labor force flows. *J. Official Stat.*, **3**, 359–373.
- Stasny, E.A. (1990). Symmetry in flows among reported victimization classifications with nonresponse. *Surv. Methodol.*, **16**, 305–330.

- Stasny, E.A. (1991). Heirarchical models for the probabilities of a survey classification and nonresponse. An example from the National Crime Survey. J. Am. Stat. Assoc., 86, 296–303.
- Stasny, E.A., Goel, P.K., and Rumsey, D.J. (1991). County estimates of wheat production. *Surv. Methodol.*, **17**, 211–225.
- Stroud, T.W.F. (1987). Bayes and Empirical Bayes approaches to small area estimation. In *Small Area Statistics*, R. Platek, J.N.K. Rao, C.E. Sarndal and M.P. Singh, Eds., John Wiley and Sons, New York, 124–137.
- Tam, S.M. (1986). Characterization of best model-based predictors in survey sampling. Biometrika, 73, 232–235.
- Tam, S.M. (1995). Optimal and robust strategies for cluster sampling. J. Am. Stat. Assoc., 90, 379–382.
- Tin, M. (1965). Comparison of some ratio estimators. J. Am. Stat. Assoc., 60, 294–307.
- Titterington, D.M. and Sedransk, J. (1986). Matching and linear regression adjustment in imputation and observational studies. *Sankhya*, **B48**, 347–367.
- Treder, R.P. and Sedransk, J. (1993). Double sampling for stratification. *Surv. Methodol.*, **19**, 95–101.
- Tukey, J.W. (1958). Bias and confidence in not-quite large samples. (abstr.). *Ann. Math. Stat.*, **29**, 614.
- Valliant, R. (1987). Generalized variance functions in stratified two-stage sampling. J. Am. Stat. Assoc., 82, 499-508.
- Valliant, R. (1993). Poststratification and conditional variance estimation. J. Am. Stat. Assoc., 88, 89–96.
- Verma, V. and Thanh, L.E. (1995). Sampling errors for the demographic and health surveys program. *Proc. Int. Stat. Inst.*, Topic 3, 55–75.
- Verma, V., Scott, C., and O'Muircheartaigh, C. (1980). Sample designs and sampling errors for the World Fertility Survey. J. R. Stat. Soc., A143, 431–473
- Waksberg, J. (1978). Sampling methods for random-digit dialing. J. Am. Stat. Assoc., 78, 40–46.
- Wang, R., Sedransk, J., and Jinn, J.H. (1992). Secondary data analysis when there are missing observations. J. Am. Stat. Assoc., 87, 952–961.
- Warner, S.L. (1965). Randomized response: a survey technique for eliminating evasive answer bias. J. Am. Stat. Assoc., 60, 63–69.
- Wolter, K.M. (1979). Composite estimation in finite populations. J. Am. Stat. Assoc., 74, 604–613.
- Wolter, K.M. (1985). Introduction to Variance Estimation. Springer-Verlag, New York.
- Wolter, K.M. and Causey, B.D. (1991). Evaluation of procedures for improving population estimates for small areas. *J. Am. Stat. Assoc.*, **86**, 278–284.
- Woodruff, R.S. (1971). A simple method for approximating the variance of a complicated estimate. J. Am. Stat. Assoc., 66, 411–414.
- Wright, R.L. (1983). Finite population sampling with multivariate auxiliary information, J. Am. Stat. Assoc., 78, 879–884.

- Yates, F. (1933). The analysis of replicated experiments when the field results are incomplete. *Emp. J. Exp. Agric.*, 1, 129–142.
- Yates, F. and Grundy, P.M. (1953). Selection without replacement from within strata with probability proportional to size. J. R. Stat. Soc., **B15**, 253–261.
- Yung, W. and Rao, J.N.K. (1996). Jackknife linearization variance estimators under stratified multi-stage sampling. *Surv. Methodol.*, **22**, 23–31.
- Zaslavsky, A.M. (1993). Combining census, dual-system, and evaluation study data to estimate population shares. *J. Am. Stat. Assoc.*, **83**(423), 1092–1105.

Further references

American Hospital Association, Guide to Health Care Field (1988).

The New York Times Almanac (1998). (Ed.) J.W. Wright

The New York Times, News Week, and Time Magazine: Results of public and political polls.

Statistical Abstract of the United States, 1999.

U.S. Baron's Profiles of American Colleges (1981).

Supplementary reading

Cassel, C.M., Särndal, C.E., and Wretman, J.H. (1977). Foundations of Inference in Survey Sampling. John Wiley & Sons, New York.

Cochran, W.G. (1997). Sampling Techniques. John Wiley & Sons, New York.

Deming, W.E. (1950). Some Theory of Sampling, Dover, New York.

Des Raj (1968). Sampling Theory. McGraw-Hill, New York.

Hansen, M.H., Hurwitz, W.N., and Madow, W.G. (1953). Sample Survey Methods and Theory, Vols. 1 and 2, John Wiley & Sons, New York.

Jessen, R.J. (1978). Statistical Survey Techniques. John Wiley & Sons, New York.

Kish, L. Survey Sampling. John Wiley & Sons, New York.

Levy, P.S. and Lemeshow, S. (1991). Sampling of Populations: Methods and Applications. John Wiley & Sons, New York.

Lohr, S.L. (1999). Sampling: Design and Analysis. Duxbury Press, New York.Som, R.K. (1995). Practical Sampling Techniques, 2nd ed., Marcel Dekker, New York.

Stuart, A. (1984). *The Ideas of Sampling*. Oxford University Press, New York. Sukhatme, P.V., Sukhatme, B.V., Sukhatme, S., and Asok, C. (1984). *Sampling Theory of Surveys with Applications*, Iowa State University Press, Ames.

Thompson, S.K. (1992). Sampling. John Wiley & Sons, New York.

Thompson, M.E. (1997). Theory of Sample Surveys. Chapman & Hall, London.

Yates, F. (1960). Sampling Methods for Censuses and Surveys. 3rd ed., Charles Griffin and Company, London.