

CURRICULUM VITAE

Name Fiona Alison Steele

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Education 1992 B.Sc. (Hons) in Mathematics and Statistics
University of Edinburgh, Class I

1993 M.Sc. in Social Statistics
University of Southampton, with Distinction

1996, Ph.D. in Statistics
University of Southampton

Employment August 2008 – present
Professor of Social Statistics
University of Bristol

September 2005 – July 2008
Reader in Social Statistics
University of Bristol

July 2001 – August 2005
Research Lecturer in Statistics
Institute of Education, University of London

September 1996 – June 2001
Lecturer in Statistics and Research Methodology
London School of Economics and Political Science

HONOURS AND AWARDS

Fellow of the British Academy (elected 2009)

Royal Statistical Society Guy Medal in Bronze, 2008

Ken Foreman lecturer, Australian Statistical Congress and Australian Bureau of Statistics, 2008

Visiting Fellow, Centre for Advanced Study, Norwegian Academy of Science and Letters, Oslo, 2007

RESEARCH INTERESTS

Interests in all areas of social statistics, with particular expertise in the development and application of multilevel modelling, event history analysis, and simultaneous and structural equation modeling.

All methodological research motivated by social science problems, particularly in the field of demography. Previous research, collaborating with demographers and economists, include: reproductive and child health in developing countries, the impact of women's participation in credit programmes in Bangladesh, the relationship between childbearing and partnership outcomes in Britain, and the impact of school resources on pupil attainment in Britain.

RESEARCH GRANTS

“STRUCTURES for Building, Learning, Applying and Computing Statistical Models”, £1.17 million, ESRC (National Centre for Research Methods node), October 2008-September 2011 (Co-applicant).

“Hierarchical Analysis of Unit Nonresponse in Sample Surveys”, ESRC, £569k, September 2007-August 2010 (Co-applicant).

“Missing Data in Life-long Observational Studies: An Application to the Effect of Social Standing on Adult Cardiovascular Health”. ESRC, £77k, August 2007-July 2008. Postdoctoral Fellowship awarded to Dr Daphne Kounali (Mentor).

“An Examination of the Impact of Family Socio-Economic Status on Outcomes in Late Childhood and Adolescence”, ESRC, £3.5 million, October 2006 – September 2011 (Co-applicant).

“LEMMA: Learning Environment for Multilevel Methodology and Applications”, ESRC, £688,942, April 2005 – March 2008 (named co-director).

“Developing Multilevel Models for Realistically Complex Social Science Data”, £281,578, Economic and Social Research Council, October 2003-September 2006 (Co-applicant).

“Multilevel Multiprocess Modelling of Partnership and Childbearing Event Histories”, £128,505, Economic and Social Research Council (Research Methods Programme), June 2003 – May 2005 (Principal Investigator).

CONSULTANCY

Review of Innovation, Development and Methodology for Office of National Statistics, May-July 2006.

Multilevel multiprocess modelling of the effect of school resources on pupil attainment in secondary schools, project based at the Institute of Education and funded by Department for Education and Skills, November 2004-December 2004.

Multilevel modelling of data from a pilot study on the relationship between resourcing and pupil attainment in schools, project based at the Institute of Education and funded by Department for Education and Skills, November 2002-January 2003.

Multilevel factor analysis of data from a survey on schools' views on their Local Education Authority, National Audit Office, November 2002.

Development of an imputation method to adjust for undercoverage in the 2001 England and Wales census, Office for National Statistics, July 1998-September 1999.

Quality assurance report on a project concerned with new methodology for the allocation of funds for children's social services, Department of Health, July 1996.

TEACHING EXPERIENCE

- Experience of teaching statistics at all levels to a wide range of audiences, with varying degrees of familiarity and confidence in mathematics and statistics.
- Co-ordinated the development of a virtual learning environment for multilevel modelling (to be launched April 2008)
- Responsible for the organisation of statistics teaching at the Institute of Education. This involved organising and contributing to the teaching of courses at introductory, intermediate and advanced level.
- Provision of statistical advisory service for research students and staff at the Institute of Education.
- Course tutor for the MSc in Social Research Methods (with Statistics) at LSE.
- Undergraduate and postgraduate units on various topics in social statistics, including logistic regression, multivariate data analysis, multilevel modelling, event history analysis, survey methods, and experimental design in social research
- Short courses on multilevel modelling and event history analysis at various locations in the UK, the U.S., Bangladesh, India and Ethiopia

PROFESSIONAL ACTIVITIES

Member of the Economic and Social Research Council Research Resources Board, September 2007 – present.

Elected member of Council of the Royal Statistical Society, June 2004 - present

Member of the Social Statistics Section committee of the Royal Statistical Society, June 2004- present

Member of the Avon local group committee of the Royal Statistical Society, May 2006 – present.

Member of steering committee for the Royal Statistical Society's Professional Development Centre, January 2007 – present.

Associate editor for *Journal of the Royal Statistical Society, Series A (Statistics in Society)*, January 2005 - present

Member of the Editorial board for the *International Journal of Social Research Methodology*, 2000-2004.

Co-editor of a special issue of the *International Journal of Social Research Methodology* on "Combining Qualitative and Quantitative Methods".

Fellow of the Royal Statistical Society.

Member of the Population Association of America.

Refereed for the following journals: *Journal of the Royal Statistical Society (Series A)*, *Demography*, *Population Studies*, *British Journal of Educational Psychology*, *Journal of Educational and Behavioral Research*, *Studies in Family Planning*, *International Family Planning Perspectives*, *International Journal of Social Research Methodology*, *Statistics in Medicine*, *Proceedings of the Royal Society*, *Journal of Health and Place*,

Demographic Research Online.

Refereed research proposals for the Economic and Social Research Council, and the Wellcome Trust.

Member of commissioning panel for ESRC secondary data analysis initiative “Understanding Population Trends and Processes”, August 2005.

External PhD examiner for Trinity College, Dublin, January 2006.

Internal PhD examiner for London School of Hygiene and Tropical Medicine and Imperial College, 2000.

External examiner for undergraduate quantitative analysis courses, Division of Social Statistics, University of Southampton, 2007-2012

PUBLICATIONS

Books

Bartholomew, D.J., F. Steele, I. Moustaki, and J. Galbraith. (2008) *Analysis of Multivariate Social Science Data*. 2nd edition. CRC Press.

Bartholomew, D.J., F. Steele, I. Moustaki, and J. Galbraith. (2002) *The Analysis and Interpretation of Multivariate Data for Social Scientists*. CRC Press.

Rasbash, J., Steele, F., Browne, W. and Goldstein, H. (2009) *A User's Guide to MLwiN, Version 2.10*. Centre for Multilevel Modelling, University of Bristol.

Papers in refereed journals

Durrant, G.B., Groves, B., Staetsky, L. and Steele, F. “Effects of Interviewer Attitudes and Behaviors on Refusal in Household Surveys”, *Public Opinion Quarterly*, to appear.

Steele, F., Sigle-Rushton, W. and Kravdal, Ø. (2009) “Consequences of Family Disruption on Children’s Educational Outcomes in Norway”, *Demography*, to appear.

Browne, W.J., Steele, F., Golalizadeh, M. and Green, M. (2009) “The Use of Simple Reparameterisations in MCMC Estimation of Multilevel Models with Applications to Discrete-Time Survival Models”, *Journal of the Royal Statistical Society, Series A*, 172(3): 579-598.

Durrant, G.B. and Steele, F. (2009) “Multilevel Modelling of Refusal and Noncontact in Household Surveys: Evidence from Six UK Government Surveys”, *Journal of the Royal Statistical Society, Series A* 172(2): 361-381.

Steele, F. (2008) “Multilevel Models for Longitudinal Data” *Journal of the Royal Statistical Society, Series A* 171(1): 5-19.

Steele, F., Vignoles, A. and Jenkins, A. (2007) “The Impact of School Resources on Student Attainment: A Multilevel Simultaneous Equation Modelling Approach”, *Journal of the Royal Statistical Society, Series A* 170(3): 801-824.

Steele, F., Kallis, C. and Joshi, H. (2006) “The Formation and Outcomes of Cohabiting and Marital Partnerships

in Early Adulthood: The Role of Previous Partnership Experience”, *Journal of the Royal Statistical Society, Series A* 169(4): 757-779.

Steele, F. and Goldstein, H. (2006) “A Multilevel Factor Model for Mixed Binary and Ordinal Indicators of Women’s Status”, *Sociological Methods & Research* 35(1): 137-153.

Steele, F., Joshi, H., Kallis, C. and Goldstein, H. (2006) “Changing Compatibility of Cohabitation and Childbearing between Young British Women born in 1958 and 1970”, *Population Studies* 60(2): 137-152.

Moustaki, I. and Steele, F. (2005) “Latent Variable Models for Mixtures of Categorical and Survival Responses, with an Application to Fertility Preferences and Family Planning in Bangladesh”, *Statistical Modelling* 5(4): 327-342.

Steele, F., Kallis, C., Goldstein, H. and Joshi, H. (2005) “The Relationship between Childbearing and Transitions from Marriage and Cohabitation in Britain”, *Demography*, 42: 647-673.

Steele, F., Goldstein, H. and Browne, W. (2004) “A General Multistate Competing Risks Model for Event History Data, with an Application to a Study of Contraceptive Use Dynamics”, *Statistical Modelling* 4(2): 145-159.

Zhang, W. and Steele, F. (2004) “A Semiparametric Multilevel Survival Model”. *Journal of the Royal Statistical Society, Series C*, 53: 387-404.

Steele, F. (2003) “A Multilevel Mixture Model for Event History Data with Long-term Survivors: An application to an Analysis of Contraceptive Sterilisation in Bangladesh.” *Lifetime Data Analysis*, 9: 155-174.

Steele, F. (2003) “Selection Effects of Source of Contraceptive Supply in an Analysis of Contraceptive Discontinuation: Multilevel Modelling when Random Effects are Correlated with an Explanatory Variable”. *Journal of the Royal Statistical Society, Series A*, 166: 407-424.

Steele, F. and S.L. Curtis. (2003) “Appropriate Methods for Analyzing the Effect of Method Choice on Contraceptive Discontinuation.” *Demography*, 40: 1-22.

Steele, F., J. Brown and R. Chambers (2002) “A Controlled Donor Imputation System for a One-Number Census.” *Journal of the Royal Statistical Society, Series A*, 165: 495-522.

Sear, R., F. Steele, I.A. McGregor and R. Mace (2002) “The Effects of Kin on Child Mortality in Rural Gambia.” *Demography*, 39(1): 43-63.

Steele, F., S. Amin and R.T. Naved (2001) “Savings/Credit Group Formation and Change in Contraception.” *Demography*, 38: 267-282.

Steele, F. and I. Diamond (1999) “Contraceptive Switching in Bangladesh.” *Studies in Family Planning*, 30: 315-328.

Steele, F. and F. El-Zahraa M.M. Geel. (1999) “The Impact of Family Planning Supply Factors on Unmet Need in Rural Egypt 1988-89.” *Journal of Biosocial Science*, 31:311-326.

Steele, F., S.L. Curtis and M.K. Choe. (1999) “The Impact of Family Planning Service Provision on Contraceptive Use Dynamics in Morocco.” *Studies in Family Planning*, 30, 28-42.

Curtis, S.L. and F. Steele (1996) “Variations in Familial Neonatal Mortality Risks in Four Countries.” *Journal of Biosocial Science*, 28, 141-159.

Steele, F., I. Diamond and S. Amin (1996) "Immunization Uptake in Rural Bangladesh: a Multilevel Analysis." *Journal of the Royal Statistical Society, Series A*, 159, 289-299.

Steele, F., I. Diamond and D. Wang (1996) "The Determinants of the Duration of Contraceptive Use in China: A Multilevel Multinomial Discrete Hazards Modelling Approach." *Demography*, 33, 12-33.

Conference proceedings

Steele, F. (2001) "A Multiprocess Multilevel Model to Allow for Selection Effects of Source of Contraceptive Supply in an Analysis of Contraceptive Discontinuation in Morocco." Invited paper, Conference Proceedings of the 53rd session of the International Statistical Institute, 22-29 August, Seoul, Korea.

Steele, F., J. Brown and R. Chambers. (2000) "A Donor Imputation System to Create a Census Database Fully Adjusted for Underenumeration." Proceedings of the Statistics Canada Symposium on Combining Data from Different Sources, May 1999.

Book chapters

Steele, F. and Goldstein, H. (2006) "Multilevel Models in Psychometrics", In: C.R. Rao and S. Sinharay (Eds.) *Handbook of Statistics, Vol. 26*. Elsevier: Amsterdam, pp.401-420.

Steele, F. and Wang, D. (2006) "Regression Analysis", In: D. Wang and A. Bakhai (Eds.) *Clinical Trials: A Practical Guide to Design, Analysis and Reporting*. Remedica: London, pp.273-286.

Steele, F. (2005) "Structural Equation Modeling: Multilevel", In: B. Everitt and D. Howell (Eds.) *Encyclopedia of Statistics in Behavioral Science*, John Wiley & Sons Ltd, Chichester, Vol. 4, pp. 1927-1931.

Choe, M.K., I. Diamond, F. Steele and S.K. Kim (1998) "Son Preference, Family Building Process and Child Mortality." In: *Two Young to Die: Genes or Gender?* ST/ESA/SER.A/155, pp.208-222. United Nations: New York.

Amin, S., I. Diamond and F. Steele (1997) "Contraception and Religiosity in Bangladesh." In: G.W. Jones, J.C. Caldwell, R.M. Douglas and R.M. D'Souza (Eds.). *The Continuing Demographic Transition*. Oxford: Oxford University Press. pp.268-289.

Other

Steele, F. (2007) Review of A. Skrondal and S. Rabe-Hesketh "Generalized latent variable modelling: multilevel, longitudinal and structural equation models", in *Statistical Methods in Medical Research*, 16 (to appear).

Steele, F. (2005) *Event History Analysis*. National Centre for Research Methods Review Paper NCRM/004. Downloadable from <http://www.ncrm.ac.uk/publications/index.php>.

Steele, F. (1999) Invited contribution to discussion of three papers presented at a session on Application of Random Effects/Multilevel Models to Categorical Data in Social Sciences and Medicine at the Royal Statistical Society, *Journal of the Royal Statistical Society, Series A*, 162: 329-330.

Steele, F. (1997) Review of D.W. Wright "Understanding Statistics: An Introduction for the Social Sciences", Sage, in *British Journal of Sociology*, 48, 712-713.