

# Samuel Hugh Langton

## Curriculum Vitae

### CONTACT

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### RESEARCH INTERESTS

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Crime science, environmental criminology, residential segregation, data visualisation, spatial analysis, mapping, longitudinal clustering, open software (e.g. R, QGIS).

### EDUCATION

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2016-2020     Doctoral candidate in Sociology, Manchester Metropolitan Crime and Well-Being Big Data Centre, Manchester Metropolitan University, UK.

Fully funded by a Vice-Chancellor's doctoral scholarship. Thesis title: 'Offender residence concentrations: a longitudinal study in Birmingham, England'. Submitted 17 October 2019 and defence passed with minor corrections on 18 February 2020.

Extensive literature reviews and quantitative analyses used to examine the geographic patterning of known offender residences along three dimensions: spatial scale, longitudinal stability and explanation. Data handling and analysis conducted on (spatial) data available through Open Government Licence and 10-years of geocoded police records.

2014-2016     MSc Sociology and Social Research, Utrecht University, Utrecht, the Netherlands.

Module topics included foundations of social theory, social networks, game theory, generalised linear models, multilevel modelling and structural equation modelling. Thesis entitled 'Residential burglary target selection: an analysis at the property-level' (supervised by Dr. Wouter Steenbeek and Dr. Jeroen Weesie) awarded grade 8.5.

2009-2012     BSc Social Policy with Government, London School of Economics and Political Science, London, UK.

### RESEARCH EMPLOYMENT

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2019-now     Postdoctoral researcher (full-time), Manchester Metropolitan Crime and Well-Being Big Data Centre, Manchester, UK.

Leading the development of data visualisations for a project commissioned as part of the Violence Reduction Unit in Greater Manchester. This involves extensive (longitudinal) descriptive statistics, graphics and maps about crimes involving the use or threat of a knife, for geocoded crime locations and victim/offender residences.

Tasks also involve supporting colleagues in projects deploying data science techniques to help estimate and tackle (crime and non-crime) police demand.

2016-2018     Research assistant (part-time), Manchester Metropolitan Crime and Well-Being Big Data Centre, Manchester, UK.

In collaboration with fellow researchers, conducted literature reviews for Greater Manchester Police (GMP) to highlight the challenges of demand originating from unconventional sources (e.g. latent demand, mental ill-health). Outputs included drafting technical reports which constituted a major component of presentations and final reports to GMP.

2016 Research assistant intern (part-time), Netherlands Institute for the Study of Crime and Law Enforcement, Amsterdam, the Netherlands.

Conducted systematic literature review on academic studies examining the spatial relationship between alcohol outlets and crime using advanced search terms on Web of Science. Output included a comprehensive tabular summary of circa 70 papers.

2015 Research assistant (part-time), Sustainable Workforce project, Utrecht University, Utrecht, the Netherlands.

Provided administrative support for a wider research team, communicating and organising meetings with British participants of the Sustainable Workforce survey.

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#### PEER-REVIEWED JOURNAL ARTICLES (PUBLISHED)

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Langton, S. H., & Solymosi, R. (2019). Cartograms, hexograms and regular grids: Minimising misrepresentation in spatial data visualisations. *Environment and Planning B: Urban Analytics and City Science*.

Langton, S. H., & Steenbeek, W. (2017). Residential burglary target selection: An analysis at the property-level using Google Street View. *Applied Geography*, 86, 292-299.

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#### PEER-REVIEWED JOURNAL ARTICLES (UNDER REVIEW)

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Adepeju, M., Langton, S. H. & Bannister, J. (*under review*). Anchored ak-medoids: a novel adaptation of k-means further refined to measure instability in the exposure to crime. *Journal of Computational Social Science*.

Adepeju, M., Langton, S. H. & Bannister, J. (*under review*). Akmedoids R package for generating directionally-homogenous clusters of longitudinal data sets. *Journal of Open Source Software*.

Buil-Gil, D., Moretti, A., & Langton, S.H. (*under review*). The integrity of crime statistics: assessing the impact of police data bias on crime mapping. *Journal of the Royal Statistical Society A*.

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#### PEER-REVIEWED JOURNAL ARTICLES (PREPARING FOR SUBMISSION)

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Langton, S.H., Steenbeek, W., & Adepeju, M. (*drafted*). An examination of variability in offender residences across different spatial scales: a study in Birmingham.

Langton, S.H., Adepeju, M., Bannister, J., & (*drafted*). Examining shifting inequality in the exposure to crime at fine-grained spatial scales – A tale of two cities.

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#### BOOK CHAPTERS (IN PRESS)

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Buil-Gil, D., Langton, S.H. (*in press*). GIS and Geovisual Analysis. In P. Atkinson, S. Delamont, R. Williams, A. Cernat & J. Sakshaug (Eds.), *Research Methods Foundations: An Encyclopaedia*. SAGE.

Langton, S.H., & Solymosi, R. (*in press*). Using Open Street Map for place-based crime analysis. In E. Groff, & C. Haberman (Eds.), *The Study of Crime and Place: A Methods Handbook*. Temple University Press.

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#### TEXTBOOKS (IN PRESS)

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Wooditch, A., Johnson, N., Solymosi, R., Medina, J., & Langton, S.H. (*in press*). *A Beginner's Guide to Statistics for Criminal Justice and Criminology using R*. Springer.

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#### OTHER ARTICLES (PUBLISHED)

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Langton, S.H. (2020). Lockdown crime trends: why antisocial behaviour is up, *The Conversation website* retrievable from <https://theconversation.com/lockdown-crime-trends-why-antisocial-behaviour-is-up-140479>.

Langton, S.H. (2019). Even the most beautiful maps can be misleading, *The Conversation website* retrievable from <https://theconversation.com/even-the-most-beautiful-maps-can-be-misleading-126474>.

Langton, S.H. (2017). When crime drops, the demands on the police don't necessarily fall, *The Conversation website* retrievable from <https://theconversation.com/when-crime-drops-the-demands-on-the-police-dont-necessarily-fall-79288>.

Langton, S.H. & Bannister, J. (2017). Space, Place and Crime in an Era of Big Data, *The Geographer, spring issue of the newsletter of the Royal Scottish Geographical Society*.

#### **INVITED PRESENTATIONS**

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- 2019 'The geography of offender housing in Birmingham'. Presented to the geospatial analyst team, offender management personnel and evidence-based policing team of West Midlands Police, Birmingham, May 29.
- 2019 'Visualising geographic information: examining methods of improving the thematic map'. Presented at the Quantitative Spatial Science Group monthly seminar, School of Geographical Sciences, University of Bristol, February 18.
- 2019 'Longitudinal stability in offender residence concentrations: visualising and explaining small area trajectories in Birmingham, England'. Presented at the Centre for Criminology and Criminal Justice quarterly work in progress seminar, University of Manchester, February 20.
- 2019 'Visualising geographic information: examining methods of improving the thematic map'. Presented at Open Data Manchester, Manchester, January 29.

#### **PRESENTATIONS**

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- 2019 'Delinquency areas still matter: demonstrating the theoretical and empirical distinctions between offenders and crimes'. Presented at the Annual Meeting of the European Society of Criminology, Ghent, September 18-21.
- 2019 'Visualising geographic information: improving interpretation through cartograms, hexograms and regular grids'. Presented with conference proceedings at GISRUK, Newcastle, April 23-26.
- 2018 'Offender residential concentrations: a longitudinal study in the United Kingdom'. Presented at the Annual Meeting of the European Society of Criminology, Sarajevo, August 29-September 1.
- 2018 'Rapid change in ethnic composition – part of a wider Brexit picture?' Presented with conference proceedings at GISRUK, Leicester, April 17-20
- 2017 'Neighbourhood trajectories: a longitudinal study of offender residence concentrations'. Presented at the Annual Meeting of the European Society of Criminology, Cardiff, September 13-16.
- 2016 'Residential burglary target selection: an analysis at the property-level using Google Street View'. Postgraduate session at the Masterclass Spatial Behaviour and Crime, Royal Netherlands Academy of Sciences, Amsterdam, May 18.

#### **TEACHING EXPERIENCE**

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- 2020 Instructor, 'A gentle introduction to QGIS', Open Data Manchester webinar series, Manchester, UK, May 12 (2-hour workshop).
- 2020 Instructor, 'Introduction to QGIS', Cathie Marsh Institute for Social Research, University of Manchester, UK, February 26 (1-day intensive).
- 2020 Instructor, 'Data visualisation in R using crime data', UK Data Service and Cathie Marsh Institute for Social Research, University of Manchester, UK, February 5 (1-day intensive).

2019	Lead organiser and instructor of a workshop introducing R for police forces, West Midlands Police, Birmingham, UK, September 26 (1-day intensive).
2019	Lead organiser and instructor of a workshop introducing R for criminologists at the Annual Meeting of the European Society of Criminology, Ghent, Belgium, September 18-21 (1-day intensive).
2018-now	Instructor, 'Getting started in R: an introduction to data analysis and visualisation', Methods at Manchester Summer School, University of Manchester, UK, July (1-week intensive, each year).
2019	Instructor, 'Introduction to Cluster Analysis using R', Cathie Marsh Institute for Social Research, University of Manchester, UK (1-day intensive).
2018	Teaching assistant, 'Modelling Criminological Data', School of Law, University of Manchester, UK (cover).
2018	Qualified as an instructor for Data and Software Carpentry.
2018	Lead organiser and instructor, 'Introduction to R', Faculty of Arts and Humanities, Researcher Development Programme for Postgraduates and Staff, Manchester Metropolitan University, UK (one-off workshop).
2015-2016	Teaching assistant and examination marker, 'Models for the analysis of social interaction', Department of Sociology, Utrecht University, the Netherlands (part-time).

## ORGANISATION

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2018	Co-organiser of six pre-arranged panels consisting of 22 individual presentations for the Space Place and Crime working group at the Annual Meeting of the European Society of Criminology conference, Sarajevo, August 29-September 1.
2017	Co-organiser of the annual postgraduate symposium for the Faculty of Arts and Humanities, Manchester Metropolitan University, May 12.

## REVIEWER

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Journal article reviewer for *Applied Geography*, *Environment and Planning B: Urban Analytics and City Science* and *Journal of Housing and the Built Environment*.

## OTHER EMPLOYMENT

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2017-now	Freelance data analyst and author for <i>Policing Insight</i> website.
2012-2014	Insolvency administrator and trainee accountant, Accura Accountants, London, UK.

## SOFTWARE

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Adepeju, M., Langton, S. H. & Bannister, J. (2019) *akmedoids: Anchored Kmedoids for Longitudinal Data Clustering*. Retrievable from <https://cran.r-project.org/web/packages/akmedoids/index.html>.

## SOFTWARE EXPERIENCE

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R, QGIS, GeoDa, Mplus, Stata.