



# Population geography I: Epistemological opportunities of mixed methods

Progress in Human Geography

1–9

© The Author(s) 2020



Article reuse guidelines:

[sagepub.com/journals-permissions](https://sagepub.com/journals-permissions)

DOI: 10.1177/0309132520955236

[journals.sagepub.com/home/phg](https://journals.sagepub.com/home/phg)**Nissa Finney** 

University of St Andrews, UK

## Abstract

Population geography is rightly recognised for its quantitative expertise. Yet, the methodological and epistemological diversification that has taken place within the sub-discipline alongside decades of theoretical developments has gone largely undiscussed. In this report, I suggest that population geography is methodologically multilingual and thus well placed to embrace mixed methods. This would bring epistemological opportunities for population geographers, advancing the sub-discipline and engagement beyond in academia and elsewhere. The confluence of theoretical and methodological developments, and global challenges that demand attention of population scholars, means the time is ripe to broaden the lens of population geographies through deliberate pursuit of mixed methods agendas.

## Keywords

critical quantitative social science, epistemology, interdisciplinarity, methodological multilingualism, mixed methods

## I Introduction

The mixing of methods in population geographies was last given explicit attention two decades ago in a special issue of *The Professional Geographer*. Introducing the piece, McKendrick (1999: 41) asserts that ‘Population geography is...an appropriate vehicle to develop a primer to debate on multi-method research’, yet Graham, in the same issue (1999: 86), observes that ‘Population geographers seem especially reluctant to explore [the territory of qualitative or mixed methods], preferring the familiarity and relative security of the empirical frontier.’ Graham’s (1999) main argument was that theoretical and conceptual development must precede methodological innovation. I contend that the emerging theoretical vibrancy of population geographies,

particularly in migration research (Smith, 2019), since Graham’s comments, and the current research climate of embracing mixed methods and interdisciplinarity, make it apt for population geographers to consider the potential for distinctive contributions. Population geographers have a methodological multilingualism with potential to be directed towards epistemological opportunities through mixed methods approaches.

The interests of population geographers have broadened from the core of the emergent sub-discipline in the mid-20th century, covered in

---

### Corresponding author:

Nissa Finney, University of St Andrews, St Andrews KY16 9AJ, UK.

Email: [Nissa.Finney@st-andrews.ac.uk](mailto:Nissa.Finney@st-andrews.ac.uk)

considerable detail in previous progress reports. From focus on measuring population change there has grown concern with processes and experiences, and an engagement with the biographical (Halfacree and Boyle, 1993; Bailey, 2009) to understand ‘lives across space’ (Barcus and Halfacree, 2018), following the changing philosophy of quantitative geography more broadly (Johnston et al., 2019). For migration scholarship in particular, diversification has characterised the substantive and methodological evolution of the last two decades. A case in point is internal migration research, dominated in the early 1990s by quantitative analyses around themes such as employment, housing, health and lifestyle (e.g. Champion and Fielding, 1992), but by the early 2010s encompassing also qualitative methods and themes such as lifestyle and performance (Smith et al., 2015).

I am concerned in this report with how this evolution primes population geographers to make intellectual contributions to the social sciences. I contend that population geography is distinctively situated to make scholarly contributions on vital social questions via mixed methods approaches. There are extensive literatures debating what constitutes mixed methods (a good starting point is Creswell and Clark, 2017) that I will not elaborate here. Rather my focus is on the potential to combine different ways of knowing to generate new, more holistic and nuanced, knowledges. This involves not only the combination of techniques (methods and data) but a conversation about what constitutes knowledge (epistemological considerations); the former necessitates the latter.

Below I review the methodological diversification of population geographers and will suggest the sub(discipline) possesses a distinct *methodological* multilingualism with potential for developing *epistemological* multilingualism. I then review the emerging literature employing mixed methods in population geography and suggest that we ought to be bolder in engaging with the implications and potentials

of mixed methods for providing a new lens for our sub-discipline. I conclude by suggesting three arenas where engagement in mixed methods presents epistemological opportunities: life-course population geographies, transformative population geographies, and theorising place and scale.

## **II Methodological-to-epistemological multilingualism**

Population geographers of different methodological traditions have a decent understanding of what others in the sub-discipline do and what kind of data and knowledge are produced, constituting a methodological multilingualism. This, combined with the theoretical developments of recent years, presents opportunities to develop epistemological multilingualism, finding language and ways to engage on our philosophical underpinnings to unlock knowledges that can only come from theory-led engagement with methodological multilingualism.

Population geography is highly regarded for its attention to quantitative social science. There has been, for example, methodological innovation in pioneering work on data visualisation, mapping and spatial analytics, often using innovative large datasets (e.g. Franklin, 2019; Zhang et al., 2019; Sander et al., 2015), population estimation and projection (e.g. Rees et al., 2012; Lomax et al., 2020) and measurement of key concepts and concerns of population geography such as segregation (e.g. Sabater et al., 2017; Catney, 2018; Olteanu et al., 2019). There is also conceptually-oriented quantitative work dealing with the lives of individuals in social context. This follows the experiences of individuals (over the lifecourse), and their connections to others, to examine process, cause and consequence (e.g. Morris et al., 2018; Lei and South, 2020; Coulter et al., 2020), and how this has changed over generations (e.g. Champion et al., 2017). This is a major trend in the sub-discipline and conjoins the technological

advances in longitudinal data and analyses with theoretical development of lifecourse and linked lives approaches (Coulter et al., 2016; Bailey, 2009). There is work whose focus is place, very often small places, or neighbourhoods. This includes work concerned with neighbourhood change (e.g. Wright et al., 2018), selection into neighbourhoods (e.g. Clark and Brazil, 2019), the categorisation of neighbourhoods (e.g. Lympelopoulou, 2019), and the impact of being (resident) in particular types of places on social outcomes (e.g. Petrović et al., 2020).

Some of this quantitative work is concerned with describing patterns and processes for whole populations. Some is primarily concerned with (spatial) ordering, reflecting the origins of quantitative geography (Johnston et al., 2019). Much of the work uses statistical modelling to test associations through hypothesis testing or by understanding and replicating connections within complex systems. These approaches are largely based on the philosophical position that there are truths and regularities that can be empirically observed.

However, quantitative population geography is also highly attuned to questions of representation. Quantitative population geographers are, for example, conscious of and attentive to the situatedness of knowledge and matters of intersectionality (Hopkins, 2019). They are part of a broader alliance of critical quantitative social scientists (Barnes, 2009; de Vries, 2019; Ruane et al., 2019), who acknowledge that ‘truths’ can be variously represented, can present themselves variously, and are known through those who experience them. This quantitative population geography is less distant in the philosophies of knowledge that underpin it from population geography that is concerned with human experience, narrative and perspective using a multitude of methods encompassing textual analysis, ethnography and interviewing (for example, on international migration: Cranston and Lloyd, 2018; Shubin, 2020).

There has, then, been a diversification in population geography not just of methods but of epistemologies in the last two decades. Combined with methodological multilingualism this presents a distinct advantage in the pursuit of new forms of knowledge. However, there is much epistemological debate to be had and work to be done. Although population geographers have long recognised that ‘[t]he quantitative/qualitative divide can itself be called into question and might more appropriately be thought of as a continuum’ (Graham, 1999: 77), this debate is latent and we too frequently revert to a binary quantitative-qualitative shorthand overlooking alliances in the questions being asked, the theoretical framings and the underpinning philosophies of knowledge. We need to openly and creatively engage with the points that ‘[p]ositivists may rely on qualitative data, just as nonpositivists may rely on quantitative data’ and that epistemological perspective shapes ‘how different methods are used’ rather than dictating ‘what methods can be used’ (Gamlen and McIntyre, 2018: 376, 390). This engagement is needed from across the methodological spectrum, to critically reflect on our own as well as others’ epistemological positions, and to disentangle assumptions about the ties between epistemology and method, particularly with regard to quantitative-qualitative distinctions. Then, we can recognise and promote the epistemological as well as the methodological richness of the sub-discipline and exploit the opportunities of mixed methods research.

This call begs the question of why population geographers have not been more eager to test epistemological boundaries and pursue mixed methods. There are no doubt many reasons of practicality and priority – what wealth of quantitative data we have enjoyed in recent years! Fundamentally, we need to be motivated to embark on challenging scholarly endeavours, to shift the lens of our discipline. My argument is that this is necessary to address crucial social

questions, and we are well primed to take this opportunity.

### III Mixed methods population geography

It is difficult to find mixed methods studies in population geography journals, or in geography journals on population themes. This is not to say that mixed methods research has not been undertaken. Robinson (1986) is one early example of mixed methods in population geography in the community studies tradition, combining quantitative description and qualitative interviews to examine the experience of Asian immigrants in Britain, elucidating the processes through which ‘white society carefully circumscribes the limits of action within which immigrant groups are allowed to exist’ (1986: 197). In recent years, mixed methods papers have emerged in population geography, particularly on migration topics. However, while they advocate mixed methods, and provide some good examples of how this might be undertaken, there is a general lack of reflection on how mixing methods augments (or alters) the knowledge produced. Discussion of methods is relegated; a missed opportunity to extol the virtues of creative, innovative and demanding methodologies. For example, Ledwith and Reilly (2013) provide a good example of the complementary use of different forms of data from the same source and set of respondents, from a primary survey of school pupils. They employ content analysis of qualitative material alongside quantitative multi-level modelling to investigate how migration is related to educational inequalities. They position mixed methods as resisting ‘the social-cultural/spatial-analytical binary’ (2013: 48), but this is not explicated – a missed opportunity.

Bilecen and Sienkiewicz (2015) provide a strong example of using interviews to generate quantitative and qualitative social network material to study transnational migrant networks but do not address key epistemological

questions of representation. Flahaux et al. (2019) can be recommended as an example of conversation between data with different epistemological underpinnings (primary surveys with administrative data and interviews) at both data collection and analysis stages. The strength of their arguments about the experiences of migrants living apart would have been greater with reflection on how this mixed method approach added to this knowledge.

Some recent publications are more explicit about epistemology and argue in favour of mixed methods to give power of explanation. Hooijen et al. (2020), for example, examine the contradictions in mobility intentions and behaviours for recent higher education graduates taking a realist epistemological approach. They use primary longitudinal survey data combined with semi-structured interviews, complementarily and in triangulation, and suggest ‘a more nuanced understanding’ after adopting mixed methods (2020: 15). Graham et al. (2015) examine the implications of (parental) international migration on the mental health of carers of children who do not migrate, using an iterative sequential process of analysis of survey and interview data. Initial survey analysis informed interview sampling; thematic analysis of interviews informed further statistical analyses. This mixing of methods enabled interpretations of gendered patterns and country differences.

Gamlen and McIntyre (2018) present a rare example of a recent paper in population geography that engages extensively and explicitly with the epistemological position of their mixed methods approach. Their framing is ‘post-positivist’ with a focus on explanation that requires both description and inference. In their study of diaspora engagement policies they employed quantitative analyses for description followed by qualitative analyses for interpretation, integrating the sources at analysis and inference stages. This mixed methods approach enabled Gamlen and McIntyre ‘to move beyond the identification of correlations and get more

directly at causation' (2018: 389) in ways that would not have otherwise been possible. Although it could be argued that this paper sits too easily with the position of quantitative methods for description and qualitative methods for 'making sense of what such actions mean to the social actors involved' (2018: 378), it provides a fine example of how mixed method population geographies can create new knowledges.

Such work enables population geographers to engage in mixed methods debates, in which we are rarely present, in allied fields such as migration studies and mixed methods studies. The ethnosurvey approach (Massey, 1987), pioneered for understanding migration across the US-Mexico border, has, for example, proven valuable for studying contemporary European migration (e.g. Kaczmarczyk and Salamonska, 2018); Christensen et al. (2011) used ethnographic methods with GPS and interactive mobile phone questionnaires to study children's everyday mobilities. On fertility, Bernardi et al. (2007) argue for a quantitative and qualitative social network approach to understand social influences on family formation.

While debates have ensued in other realms of the discipline about synthesis, holism and hybridity (Watkins, 2020), population geographers have been notable by their absence. For example, arguments have been made for plural epistemologies in geography around questions of climate change and adaptation (e.g. Burnham et al., 2016; Nightingale, 2016). Nightingale (2016: 46) posits that 'The goal is not to create a complete picture – a situated knowledges perspective accepts that all views are always partial – but rather to provide new alternatives for thinking about causes as well as solutions to research problems'. Bailey's (2010) argument that climate change is an arena in which population geographers might further contribute can be extended to making mixed methods contributions, building on prominent work on forced migration and climate change (e.g. Black et al, 2013).

Undoubtedly, mixed methods research is very difficult, philosophically and practically (Finney et al., 2019). So, what is the motivation, just now, for population geographers to pursue mixed methods? DeLyser and Sui (2011: 112) argue that '[i]f our research and our discipline are to survive and remain relevant, we must move beyond divisiveness' towards 'hybrid geographies'. They also point to new data landscapes presenting opportunities for creative mixed methods (DeLyser and Sui, 2013), and the possibilities of the value of more traditional and enduring methods being considered anew in this context (DeLyser and Sui, 2014). Furthermore, '[t]he complex problems of our times will demand both the greatest creativity and the greatest diversity of approaches – not a new paradigm or a new methodological "revolution", but instead an embrace of engaged methodological pluralism, where different and divergent methods flourish to tackle issues from different angles' (DeLyser and Sui, 2013: 303). We might also be convinced by the lively mixed methods debates that consider the value of mixed methods for research with vulnerable and marginalized groups, highlighting the potential for transformative, co-produced and participatory research within mixed methods frameworks (see, for example, the 2014 Special Issue of the *Journal of Mixed Methods Research*: Gomez, 2014). There are echoes here of concerns, long articulated, of population geography's work with children, vulnerable migrants and other marginalised peoples and places (e.g. Botterill et al., 2018). Population geographers, being methodologically multilingual and epistemologically diverse, are in a strong position to contribute in these regards to the sub-discipline and beyond.

#### **IV Conclusion: Epistemological opportunities**

Reflections on the state of population geography at the turn of the century have focused, importantly, on theoretical direction (e.g. White

and Jackson, 1995; Graham and Boyle, 2001; Philo, 2005; Findlay and Boyle, 2007; Tyner, 2014). While arguments have been made for the contemporary relevance of population geography, rarely are the methodological distinctions and opportunities celebrated (as is the case for the discipline more widely: DeLyser and Sui, 2011). The theoretical developments of population geographies, together with methodological multilingualism and epistemological diversity, provide foundations for renewed conversations about the opportunities of mixed methods research to advance knowledge.

A case for why mixed methods might be beneficial, why population geographers are well positioned to lead their development within the discipline, and why this is timely has already been made. By way of conclusion, I suggest three avenues that would allow population geographers to further their own scholarly agendas and be part of broader important epistemological conversations.

First is via work on lifecourse and linked lives. Important theoretical developments have been used to frame scholarship from a whole range of methodological approaches. This is illustrated in a Special Issue of *Population, Space and Place* introduced by Findlay et al. (2015). As population geographers, we would be wise to consider what might be gained in intellectual endeavour were some of these approaches to be combined.

Second is the potential for transformative population geography. For population geographers concerned with affecting social change, transformative mixed methods are relevant in their attentiveness to revealing the realities and lived experiences of more-and-less powerful participants. Many population geographers are interested in inequalities and social-spatial justice, and it has been argued that a mixed methods approach has particular power in this regard (Mertens, 2007). Building mixed methods population geographies may be one fruitful way to meet Smith's (2019) call for population

geography to be more politically engaged and impactful.

A third way that mixed methods population geographies may be attuned to epistemological advancement is in consideration of concepts of place and scale. Population geographies are about the lives of individuals in spatial/social/political/cultural context. Mixed methods may bring greater understanding to the scalar relationships, contributing not only to the sub-discipline but to the 'spatial turn' of the social sciences, including in allied disciplines of demography and sociology. Mixing methods is ideal for a scalar approach to social problems (Haarstad, 2014) as methods can be thought of as relational and roughly corresponding to different scales of social experience and analysis (Gamlen and McIntyre, 2018).

In these and other ways population geography can pursue observation, interpretation and explanation of lives across space and contribute to methodological and epistemological debates. Of course, achieving these visions requires enabling disciplinary structures (Finney et al., 2019). We need new ways of writing to carve out a space for this and a reviewing system that is capable of assessing mixed methods contributions. This journal is one avenue for this, and international conferences and professional bodies also have important roles to play.

The emergence of mixed methods epistemological opportunities for population geographies may be particularly timely. In these unprecedented global circumstances of 2020, as populations worldwide react to coronavirus, population geographers can offer much to the examination of the responses, experiences and impacts of the pandemic. For example, in this renewed context, we can interrogate who the 'surplus populations' are (Tyner, 2014), how socio-spatial inequalities are produced and reproduced (Dorling, 2019), how linked lives shape behaviours and experiences, including (im)mobilities (Coulter et al., 2016), how lifecourses shift (Bailey, 2009), and how place and

community take new forms and significance. Population geographers might take advantage of their methodological multilingualism and the potential for mixed methods to garner holistic insights into these crucial matters.

### Acknowledgements

For insightful comments on a draft of this progress report I am very grateful to Bill Clark, Allan Findlay, Elspeth Graham, Alan Marshall and Helen Packwood. I thank David Manley for his support and patience.

### Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### ORCID iD

Nissa Finney  <https://orcid.org/0000-0001-6602-9920>

### References

- Bailey AJ (2009) Population geography: Lifecourse matters. *Progress in Human Geography* 33(3): 407–418.
- Bailey AJ (2010) Population geographies and climate change. *Progress in Human Geography* 35(5): 686–695.
- Barcus HR and Halfacree K (2018) *An Introduction to Population Geographies: Lives across Space*. Abingdon: Routledge.
- Barnes T (2009) ‘Not only . . . but also’: Quantitative and critical geography. *Professional Geographer* 61: 292–300.
- Bernardi L, Keim S and von de Lippe H (2007) Social Influences on fertility: A comparative mixed methods study in East and West Germany. *Journal of Mixed Methods Research* 1(1): 23–47.
- Bilecen B and Sienkiewicz JJ (2015) Informal social protection networks of migrants: Typical patterns in different transnational social spaces. *Population, Space and Place* 21: 227–243.
- Black R, Arnell NW, Adger WN, Thomas D and Geddes A (2013) Migration, immobility and displacement outcomes of extreme events in nature and society. *Environmental Science and Policy* 27(1): S32–S43.
- Botterill K, McCollum D and Tyrrell N (2018) Negotiating Brexit: Migrant spatialities and identities in a changing Europe. *Population, Space and Place* 25(1): e2216.
- Burnham M, Ma Z and Zhang B (2016) Making sense of climate change. *Area* 48: 18–26.
- Catney G (2018) The complex geographies of ethnic residential segregation: Using spatial and local measures to explore scale-dependency and spatial relationships. *Transactions of the Institute of British Geographers* 43: 137–152.
- Champion T and Fielding T (1992) *Migration Patterns and Processes, Vol. 1: Research Progress and Prospects*. London: Belhaven Press.
- Champion T, Shuttleworth I and Cooke T (2017) *Internal Migration in the Developed World: Are We Becoming Less Mobile?* London: Routledge.
- Christensen P, Romero Mikkelsen M, Neilsen TAS and Harder H (2011) Children, mobility, and space: Using GPS and mobile phone technologies in ethnographic research. *Journal of Mixed Methods Research* 5(3): 227–246.
- Clark WAV and Brazil N (2019) Neighborhood selections by young adults: Evidence from a panel of US adolescents *Journal of Urban Affairs* 41(7): 981–998.
- Coulter R, Bayrakdar S and Berrington A (2020) Longitudinal life course perspectives on housing inequality in young adulthood. *Geography Compass* 14: e12488.
- Coulter R, van Ham M and Findlay AM (2016) Rethinking residential mobility: Linking lives through time and space. *Progress in Human Geography* 40(3): 352–374.
- Cranston S and Lloyd J (2018) Bursting the bubble: Spatialising safety for privileged migrant women in Singapore. *Antipode* 51: 478–496.
- Creswell JW and Clark VLP (2017) *Designing and Conducting Mixed Methods Research*. London: SAGE.
- de Vries R (2019) *Critical Statistics*. London: Macmillan/Red Globe Press.
- DeLyser D and Sui D (2011) Crossing the qualitative quantitative chasm I: Hybrid geographies, the spatial turn, and volunteered geographic information (VGI). *Progress in Human Geography* 36(1): 111–124.
- DeLyser D and Sui D (2013) Crossing the qualitative quantitative divide II: Inventive approaches to big data,

- mobile methods, and rhythm analysis. *Progress in Human Geography* 37(2): 293–305.
- DeLyser D and Sui D (2014) Crossing the qualitative quantitative chasm III: Enduring methods, open geography, participatory research, and the fourth paradigm. *Progress in Human Geography* 38(2): 294–307.
- Dorling D (2019) *Inequality and the 1%*. London: Verso.
- Findlay AM and Boyle P (2007) The difference of population, space and place. *Population, Space and Place* 13: 1–2.
- Findlay A, McCollum D, Coulter R and Gayle V (2015) New mobilities across the life course: A framework for analysing demographically linked drivers of migration. *Population, Space and Place* 21: 390–402.
- Finney N, Clark K and Nazroo J (2019) Opportunities and challenges doing interdisciplinary research: What can we learn from studies of ethnicity, inequality and place? *Journal of Ethnic and Migration Studies* 45(17): 3173–3187.
- Flahaux M-L, Wayack-Pambe M, Soura AB, Compaore Y and Sanogo S (2019) Reunifying and separating: An analysis of residential arrangements of migrant couples in Ouagadougou, Burkina Faso. *Population, Space and Place* 45(4): 835–863.
- Franklin RS (ed.) (2019) *Population, Place and Spatial Interaction*. London: Springer.
- Gamlen A and McIntyre C (2018) Mixing methods to explain emigration policies: A post-positivist perspective. *Journal of Mixed Methods Research* 12(4): 374–393.
- Gomez A (2014) New developments in mixed methods with vulnerable groups. *Journal of Mixed Methods Research* 8(3): 317–320.
- Graham E (1999) Breaking out: The opportunities and challenges of multi-method research in population geography. *The Professional Geographer* 51(1): 76–89.
- Graham E and Boyle P (2001) Introduction: (Re)theorizing population geography: Mapping the unfamiliar. *International Journal of Population Geography* 7: 389–394.
- Graham E, Jordan LP and Yeoh BSA (2015) Parental migration and the mental health of those who stay behind to care for children in South-East Asia. *Social Science & Medicine* 132: 225–235.
- Haarstad H (2014) Climate change, environmental governance and the scale problem. *Geography Compass* 8(2): 87–97.
- Halfacree KH and Boyle PJ (1993) The challenge facing migration research: The case for a biographical approach. *Progress in Human Geography* 17(3): 333–348.
- Hooijen I, Meng C and Reinhold J (2020) Be prepared for the unexpected: The gap between (im)mobility intentions and subsequent behaviour of recent higher education graduates. *Population, Space and Place*. DOI: 10.1002/psp.2313.
- Hopkins P (2019) Social geography I: Intersectionality. *Progress in Human Geography* 43(5): 937–947.
- Johnston R, Harris R, Jones K, Manley D, Wang WW and Wolf L (2019) Quantitative methods II: How we moved on – Decades of change in philosophy, focus and methods. *Progress in Human Geography*. DOI: 10.1177/0309132519869451.
- Kaczmarczyk P and Salamonska J (2018) Why we still need ethnosurveys in migration research: Empirical evidence from Poland. *Journal of Mixed Methods Research* 12(4): 458–476.
- Ledwith V and Reilly K (2013) Two tiers emerging? School choice and educational achievement disparities among young migrants and non-migrants in Galway City and urban fringe. *Population, Space and Place* 19: 46–59.
- Lei L and South SJ (2020) The comforts of home: The association between co-residence with parents and young adults' residential mobility and migration in the United States. *Population, Space and Place*. DOI: 10.1002/psp.2323.
- Lomax N, Wohland P, Rees P and Norman P (2020) The impacts of international migration on the UK's ethnic populations. *Journal of Ethnic and Migration Studies* 46(1): 177–199.
- Lymperopoulou K (2019) Immigration and ethnic diversity in England and Wales examined through an area classification framework. *Journal of International Migration and Integration*. DOI: 10.1007/s12134-019-00678-9.
- Massey SD (1987) The Ethnosurvey in Theory and Practice. *The International Migration Review* 21(4): 1498–1522 DOI: 10.2307/2546522.
- McKendrick JH (1999) Multi-method research: An introduction to its application in population geography. *The Professional Geographer* 51(1): 40–50.
- Mertens DM (2007) Transformative paradigm: Mixed methods and social justice. *Journal of Mixed Methods Research* 1(3): 212–225.

- Morris T, Manley D and Sabel CE (2018) Residential mobility: Towards progress in mobility health research. *Progress in Human Geography* 42(1): 112–133.
- Nightingale AJ (2016) Adaptive scholarship and situated knowledges? *Area* 48: 41–47.
- Olteanu M, Randon-Furling J and Clark WAV (2019) Segregation through the multiscalar lens. *Proceedings of the National Academy of Sciences* 16(25): 12250–12254.
- Petrović A, Manley D and van Ham M (2020) Freedom from the tyranny of neighbourhood: Rethinking socio-spatial context effects. *Progress in Human Geography*. DOI: 10.1177/0309132519868767.
- Philo C (2005) Sex, life, death, geography: Fragmentary remarks inspired by ‘Foucault’s population geographies. *Population, Space and Place* 11: 325–333.
- Rees PH, van der Gaag N, de Beer J and Heins F (2012) European regional populations: Current trends, future pathways and policy options. *European Journal of Population* 28(4): 385–416.
- Robinson V (1986) *Transients, Settlers and Refugees*. Oxford: Clarendon Press.
- Ruane S, Evans J and Southall H (2019) *Data in Society: Challenging Statisticians in an Age of Globalisation*. Bristol: Policy Press.
- Sabater A, Graham E and Finney N (2017) The spatialities of ageing: Evidencing increasing spatial polarisation of the old and young in England and Wales. *Demographic Research*. DOI:10.4054/DemRes.2017.36.25,
- Sander N, Abel G and Bauer R (2015) Visualising global migration. *Journal of International Affairs* 68(2): 272–273.
- Shubin S (2020) Evaluating the process of cross-European migration: Beyond cultural capital. *Transactions of the Institute of British Geographers*. DOI: 10.1111/tran.12372.
- Smith DP (2019) Population geography II: The r/age of migration. *Progress in Human Geography* 43(4): 729–738.
- Smith DP, Finney N, Halfacree K and Walford N (2015) *Internal Migration. Geographical Perspectives and Processes*. Farnham: Ashgate.
- Tyner JA (2014) Population geography I: Surplus populations. *Progress in Human Geography* 37(5): 701–711.
- Watkins C (2020) The field and the work: Hybridity as mantra and method. *Geographical Review* 110(1–2): 8–12.
- White P and Jackson P (1995) (Re)theorizing population geography. *International Journal of Population Geography* 1: 111–123.
- Wright R, Ellis M, Holloway SR and Catney G (2018) The instability of highly racially diverse residential neighborhoods in the United States. *Sociology of Race and Ethnicity*. DOI: 10.1177/2332649218819168.
- Zhang Y, Chapple K, Cao M, Dennett A and Smith D (2019) Visualising urban gentrification and displacement in Greater London. *Environment and Planning A: Economy and Space*. DOI: 10.1177/0308518X19880211.