

FORUM CONTRIBUTION

# African Population History: Contributions of Moral Demography

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## Abstract

Improving knowledge about African historical demography is essential to addressing current population trends and achieving deeper understanding of social, economic, and political change in the past and present. I use census and parish register data from Tanganyika to address the origins of twentieth-century population growth, to describe how major changes in fertility and child mortality began in the 1940s, and to emphasise the significance of the large rise in fertility between the 1940s and 1970s. Through this work and my wider survey of parish registers in Malawi, Uganda, Tanzania, and Zambia, I consider the relationships between power, evidence, and meaning in these data sources. Alongside the macro gaps in Africa's population history are significant microsilences — lacunae in the sources and data which reflect the hegemonic structures within which they were produced. I suggest a moral demography approach to their analysis, borrowing from the reflexive and dialectic method found in studies of moral economy.

**Keywords:** Africa; Tanzania; demography; quantitative sources; reproduction; family; fertility

The population of Africa is projected to grow tenfold between 1960 and 2050, representing the fastest demographic growth in human history. Sub-Saharan Africa is expected to account for more than half of the total increase in global population between 2019 and 2050 and to rank as the most populous of the eight UN world regions by the 2060s.<sup>1</sup> Fertility has declined since the 1980s, especially in Eastern and Southern Africa, but fertility transition has proceeded at half of the speed of Asian and Latin American declines, and fertility rates and preferences remain very high in Western and Central Africa.<sup>2</sup> There is region-wide evidence of 'stalling' fertility transitions, at higher rates than experienced elsewhere, creating uncertainty about future trajectories.<sup>3</sup> Since the early 2000s national governments and international donors have renewed efforts towards meeting and raising demand for improved reproductive health and voluntary family planning, aiming to mitigate possible impacts of population growth on poverty and to harness potential economic dividends of youthful populations.<sup>4</sup>

<sup>1</sup>United Nations, *World Population Prospects 2019: Highlights*, ST/ESA/SER.A/423 (New York, 2019), 6. The focus of this paper is on sub-Saharan Africa. I do not address the (better-documented) population history of North Africa.

<sup>2</sup>A. Hinde and D. Shapiro, 'On the pace of fertility decline in sub-Saharan Africa', *Demographic Research*, 37:1 (2017), 1327–38.

<sup>3</sup>B. Schoumacker, 'Stalls in fertility transitions in sub-Saharan Africa: revisiting the evidence', *Studies in Family Planning*, 50:3 (2019), 257–8.

<sup>4</sup>C. Mbacké, 'The persistence of high fertility in sub-Saharan Africa: a comment', *Population and Development Review*, 43: S1 (2017), 330–7.

Within these discourses about the prospect of population growth for Malthusian ‘disaster’ or economic ‘dividend’ in sub-Saharan Africa are important silences, including poor coverage by data systems, and women’s voices. Donor expectations of women’s role as ‘sexual stewards’ who, with the right resources and opportunities, will inevitably progress towards smaller fertility preferences have been questioned, especially given continued high fertility preferences in the region.<sup>5</sup> Anthropological demographers have described the interplay between contingency, modernity, agency, and reproduction on the continent, and there have been calls for greater focus on the institutional and historical origins of current demographic regimes as well as for the foregrounding of personal histories and hopes in individuals’ decision-making.<sup>6</sup> Despite considerable research, especially on the demographic impact of slavery and colonialism, knowledge of Africa’s past population trends remains sparse compared with other world regions. Unsilencing historical demography will contribute to more productive understandings of Africa’s present growth, its likely trajectories, and appropriate interventions, and may open new possibilities for economic and social history in the region.

Alongside the broad gaps in African population history, there are also microsilenences — historical demographic data sources are embedded in hegemonic relations which render their categories, constituencies, and contexts selective. Using such sources to reconstruct demographic trends requires qualitative engagement with the wider historical record, where arguments and uncertainties about those categories can be found. I suggest a moral demography approach, borrowing from moral economy, which foregrounds the analysis of arguments as well as reflexivity — both of which are essential to a critical reading of African historical demographic sources.

Coined in the eighteenth century, the concept of ‘moral economy’ was popularised in the 1970s through Edward Thompson’s study of the expectations of exchange and entitlements underpinning eighteenth-century English food riots and James Scott’s application of the concept to peasant politics in colonial Southeast Asia.<sup>7</sup> It has found resonance in African history, primarily in analysing changing political discourses around rights to land and subsistence and concepts of social justice and civic virtue in the making of moral ethnicities.<sup>8</sup> Social reproduction and debates about family, sexuality, gender, and generation in the context of shifting modes of economic production and intergenerational exchange have been integral to moral economies. In the penultimate section of this paper, I suggest shifting the lens to take a ‘moral demography’ frame in which, to paraphrase Thomas Spear, decisions about reproduction are ‘seen as comprising a dynamic set of values, like “tradition”, that continually inform people’s perceptions of and accommodations to their often changing conditions’ and are affected by and interact with contingent circumstances.<sup>9</sup> While relations of production remain important in a moral demography approach, other hegemonic influences on ideas of honourable family making — including religion, schooling, and perceptions of ‘modernity’ — are also included.<sup>10</sup>

Finding, understanding, and foregrounding the arguments within which moral demographies were created brings a reflexive approach to the quantitative record, including its formation and

<sup>5</sup>J. Sasser, *On Infertile Ground: Population Control and Women’s Rights in the Era of Climate Change* (New York, 2018), 1–29.

<sup>6</sup>J. Johnson-Hanks, ‘Uncertainty and the second space: modern birth timing and the dilemma of education’, *European Journal of Population*, 20:4 (2004), 351–73; J. Johnson-Hanks, *Uncertain Honor: Modern Motherhood in an African Crisis* (Chicago, 2006), 21; C. Bledsoe, *Contingent Lives: Fertility, Time, and Aging in West Africa* (Chicago, 2002), 1–34.

<sup>7</sup>E. P. Thompson, ‘The moral economy of the English crowd in the eighteenth century’, *Past and Present*, 50 (1971), 76–136; J. Scott, *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia* (New Haven, 1976).

<sup>8</sup>J. Lonsdale, ‘The moral economy of Mau Mau’, in B. Berman and J. Lonsdale (eds.), *Unhappy Valley: Conflict in Kenya and Africa, Book Two: Violence and Ethnicity* (London, 1992), 265–468; S. Feierman, *Peasant Intellectuals: Anthropology and History in Tanzania* (Madison, 1990).

<sup>9</sup>T. Spear, *Mountain Farmers: Moral Economies of Land and Agricultural Development in Arusha and Meru* (London, 1997), 11–12.

<sup>10</sup>Johnson-Hanks, ‘Uncertainty’.

meanings as well as its formal evaluation. Thompson juxtaposed the moral economy of the English crowd with that of capitalist producers, and John Lonsdale described how Kikuyu moral ethnicity was constituted through arguments about civic virtue in the context of changing relations of production and reproduction in colonial Kenya. Similarly, it is necessary to analyse how moral demographics were negotiated within communities in the context of colonialism and Christianity and to understand processes of mutuality and exchange.<sup>11</sup> Instead of attributing compositional effects in the quantitative sources to ‘selection effects’ and rejecting apparent categorisation biases, gaps and silences can be questioned and compensated on the basis of the qualitative record. Ultimately such an approach permits demographic analysis as well as a wider reconstruction of the meanings and processes of change. Moral demography allows us to operationalise the point that ‘in some cases, selectivity effects are not threats to the data quality, but are instead the processes most central to understanding a phenomenon;’ it allows us to take ‘structure’ seriously, guided by the voices of those experiencing and enacting change.<sup>12</sup>

If historical demography in Africa is notoriously difficult — due to the lack of sources and the power structures in which existing sources are embedded — its resolutions may be especially productive, with legacies for wider social history. Reconstructing historical population trends is not a purely quantitative mission; historians of all orientations have much to contribute. Hence this forum, which is conceived to highlight recent directions in the field and to encourage further research. The forum contains four research papers. John Thornton returns to his earlier reconstruction of population history in the Kingdom of Kongo using parish registers.<sup>13</sup> Thornton contributes to a core debate in precolonial history about the demographic impact of the slave trade. He shows that Kongo’s population size in the seventeenth century was higher than previously calculated, revising consensus about the timing and duration of grave population loss through slavery. His study demonstrates how parish registers can be evaluated against the wider archival record to produce robust estimates. Jelmer Vos and Paulo Teodoro de Matos showcase the Counting Colonial Populations database in their analysis of four districts in Angola through the nineteenth century. They address the ‘transformation thesis’ by considering how the size and composition of slave populations within Africa changed as the transatlantic trade declined.<sup>14</sup> They show large variation in the extent to which societies transitioned from the external trade to internal use of slaves for commodity production. Their paper makes important contributions by, first, showing why micro-level studies are needed to explore how macro-level trends were enacted locally; second, highlighting the role of collaborative projects in creating databases for comparative research; and third, benefiting from synergies with economic history, which has been crucial in the recent renaissance of historical demography in the region.

Gerardo Serra and Morten Jerven address another major theme in African historical demography — that of uneven demographic growth and its association with various forms of political and economic accumulation. They examine the controversy over the 1963 Nigerian census and describe the incentive structures — federal parliamentary representation and the distribution of federal revenues — that affected population counting in the region. Their paper speaks of how colonial and postcolonial identities were designed and disrupted through the heuristics of enumeration and its public discourses, as well as how enumeration makes subpopulations ‘legible’ in processes of nationhood. While there are synergies with this article in the authors’ call for interdisciplinarity and emphasis on the ethics of statistical representation, in this paper I return to the central debate about the ‘origins’ of population growth in the twentieth century and suggest potential data and

<sup>11</sup>Thompson, ‘Moral economy’; Lonsdale, ‘Moral economy of Mau Mau’.

<sup>12</sup>Johnson-Hanks, *Uncertain Honour*, 20.

<sup>13</sup>J. Thornton, ‘Demography and history in the Kingdom of Kongo, 1550–1750’, *The Journal of African History*, 18:4 (1977), 507–30.

<sup>14</sup>See P. Lovejoy, *Transformations in Slavery: A History of Slavery in Africa* (3rd edn, Cambridge, 2011), esp. ch. 1.

methods for its resolution. I focus on Tanganyika, using census and parish register data to reconstruct demographic trends, and show that fertility did not begin to increase until the 1940s. The decline in child mortality also began at that time according to the national censuses, though it occurred slightly earlier in Christian communities according to the parish records. I emphasise the significance of the late colonial rise in fertility across the continent for contemporary understandings of fertility transition in Africa. I then draw on my wider survey of registers from 35 parishes across Eastern, Central, and Southern Africa to describe the moral demography approach and the promise of these records for further demographic reconstruction. Finally, I point to future prospects for African historical demography and outline an agenda for research.

### The origins of African population growth

Africa's projected population growth has potential implications for the livelihoods of current and prospective generations in the region, as well as for geopolitics, global health, and sustainable development.<sup>15</sup> As demography increasingly occupies decision-makers in Africa, understanding the historical roots of today's trends has risen on the agenda. History matters for population growth in Africa for (at least) three reasons. First, past increases in fertility and improvements in child survival have demographic legacies, which have led to larger cohorts of childbearing women and rising numbers of births in African societies, even in the context of declining fertility per woman.<sup>16</sup> Second, evidence of stalling fertility declines and other 'exceptional' characteristics of transition in Africa has led to a search for historical, institutional, and cultural explanations for current trends and their likely trajectories.<sup>17</sup> Third, those historically-grounded explanations have implications for policy options and interventions. Identifying the origins of population growth has been a long-running ambition in African history, both to enhance understanding of contemporary demographic legacies and because of its implications for social, medical, and family history and for evaluating exploitation and resilience in the past.<sup>18</sup>

While the main focus of this section is the origins of twentieth-century population growth, the scale of population growth in the precolonial period remains even more contested, largely because of its significance in understanding the negative demographic impact of slavery as well as the potentially positive impact of the expansion of agriculture at the same time. There has been vast research on the volume and likely mortality of Africa's various slave trades. Estimates suggest that 12.5 million people were exported through the transatlantic trade during 1514–1866, and a possibly similar total were exported over a much longer span of time through other routes across the Sahara, the Red Sea, and the Indian Ocean.<sup>19</sup> The growing importance of slavery within Africa during the nineteenth century has also been emphasised. Despite some consensus about the volume of the trade, its impact on population growth remains debated, partly due to the lack of data on total population starting points, and also because demographic impact depends not only on volume and mortality but also on lost reproductive potential — for which the age and sex structure of slave populations matters, as does the potentially compensating role of matrilineality and polygamy. The demographic impact may be greater still, depending on the extent to which slave trading aligned with other forms of violence and destruction, such as an increase in the number of firearms, loss of property, rebellions, and epidemic disease.<sup>20</sup>

<sup>15</sup>J. Cleland and K. Machiyama, 'The challenges posed by demographic change in sub-Saharan Africa: a concise overview', *Population and Development Review*, 43:S1 (2017), 264–86.

<sup>16</sup>United Nations, *World Population Prospects 2019*, 8.

<sup>17</sup>Mbacké, 'Persistence of high fertility'.

<sup>18</sup>J. Iliffe, *Africans: The History of a Continent* (Cambridge, 1995), 4–5.

<sup>19</sup>Joseph Inikori estimated 15.4 million slaves were shipped through the European slave trade. See J. Inikori, 'The volume of the British slave trade, 1655–1807', *Cahiers d'Études Africaines*, 32:128 (1992), 643–88, esp. 686; J. Ewald, 'Review: slavery in Africa and the slave trades from Africa', *American Historical Review*, 97:2 (1992), 465–85, esp. 466.

<sup>20</sup>P. Lovejoy, 'The impact of the Atlantic slave trade on Africa: a review of the literature', *The Journal of African History*, 30:3 (1989), 365–94; S. Doyle, 'Demography and disease', in J. Parker and R. Reid (eds.), *The Oxford Handbook of Modern African History* (Oxford, 2013), 38–55; Iliffe, *Africans*, 152.

There is greater consensus about the likely demographic trajectory of the later nineteenth century, when there was widespread, although regionally-diverse, demographic ‘crisis’ associated partly with the increase of slavery within Africa and partly with epidemic and epizootic disease on the trail of expanding international trade networks, widespread drought and famine, and mortality associated with colonial violence and ‘pacification’ campaigns.<sup>21</sup> As John Iliffe has emphasised, impact was determined by prior exposure and susceptibility to pathogens as well as by the specific character of colonial incursions, with probably the most demographic damage wrought in equatorial Africa, ‘where violence, famine, smallpox, sleeping sickness, venereal diseases, and influenza coincided’ to reduce the population of Belgian Congo by possibly one-third or one-half.<sup>22</sup>

From the 1920s, we see the real divergence in descriptions of the origins of twentieth-century population growth. On one side, John Iliffe and John Caldwell both locate its origins in the interwar period, arguing that colonial infrastructures, governance, and medical care led to a decline in crisis mortality. Although mortality decline was the immediate change during the interwar period in their view, growth occurred because very high underlying levels of fertility tended to outstrip mortality from natural causes, so as crisis mortality reduced, populations grew. Iliffe and Caldwell both situate the roots of high fertility in Africa’s precolonial environmental and human history, arguing that historic underpopulation in hostile landscapes and disease environments shaped both practices of population accumulation and intergenerational and gender relations geared around maximising societies’ productive and reproductive capacities, thus determining the development of African cultures and political institutions. For Iliffe, the driving force of demography was so strong that it is ‘the thread that ties African history together at all its different periods and levels’.<sup>23</sup> For Caldwell, resulting pronatal (fertility-maximising) cultural institutions — such as marriage contracts between families rather than individuals, the reinforcement of men’s authority through polygamy and spousal age gaps, and patterns of birth spacing and fostering that maximised child survival and spread the costs associated with child-rearing — have contemporary legacies, including an ‘exceptional’ course for demographic transition in Africa.<sup>24</sup>

Critics of the ‘natalist’ stance of Iliffe and Caldwell have questioned the beneficial impact of colonial rule on mortality, arguing that even if colonial rule reduced crisis mortality, the introduction of capitalism had countervailing impacts on health, including labour migration into disease endemic zones, worsening occupational health, and the undermining of food security and diversity through cash cropping and migration.<sup>25</sup> These critics instead argue that twentieth-century growth began with rising fertility in the 1920s and 1930s, stimulated by changing structural relations in production and reproduction. Their argument is fourfold. First, colonial demand for taxes heightened African need for the labour of children to work on family-farmed cash crops. Second, adult male paid labour increased the ability of young men to marry earlier. Third, changing marriage laws

<sup>21</sup>H. Kjekshus, *Ecology Control and Economic Development in East African History: The Case of Tanganyika 1850–1950* (London, 1996); Iliffe, *Africans*, 208–11.

<sup>22</sup>Iliffe, *Africans*, 211.

<sup>23</sup>*Ibid.* 5. For a critique of Iliffe’s argument, see T. Spear, ‘Africa’s population history’, *The Journal of African History*, 37:3 (1996), 479–85.

<sup>24</sup>J. Caldwell, ‘Major questions in African demographic history’, *Population and Development Review*, 42:2 (2016), 343–58; Mbacké, ‘Persistence of high fertility’, 331. See also, R. Lesthaeghe, ‘Production and reproduction in sub-Saharan Africa: an overview of organizing principles’, in R. Lesthaeghe (ed.), *Reproduction and Social Organization in Sub-Saharan Africa* (Berkeley, 1989), 13–59. Demographic transition is a generalised theory about how populations pass through stages of fertility, mortality, and growth in the context of ‘modernisation’. See D. Kirk, ‘Demographic transition theory’, *Population Studies*, 50:3 (1996), 361–87.

<sup>25</sup>M. Turshen, ‘Population growth and the deterioration of health: mainland Tanzania, 1920–1960’, in D. Cordell and J. Gregory (eds.), *African Population and Capitalism: Historical Perspectives* (Boulder, CO, 1987), 187–200; M. Dawson, ‘Health, nutrition, and population in Central Kenya, 1890–1945’, in Cordell and Gregory, *African Population and Capitalism*, 201–17; R. Packard, *White Plague, Black Labor: Tuberculosis and the Political Economy of Health and Disease in South Africa* (Berkeley, 1989).

and the reduction in polygyny reduced the ability of women to negotiate for long periods of post-partum abstinence, while female education reduced the authority of older women who taught the value of birth spacing. Finally, medical campaigns against sexually transmitted infections had a positive effect of reducing sterility.<sup>26</sup>

Resolving the debate about the origins of twentieth-century population growth has been hampered by the lack of reliable demographic data. Robert Kuczynski in his demographic survey of East Africa wrote that ‘practically nothing is known of the population trend’, and he showed how colonial officials were ‘tempted to draw far-reaching conclusions from the scanty population data at their disposal’.<sup>27</sup> The pre-1940s censuses were not true household surveys; they were compiled from population estimates by district officials based on multiplying male tax registers by estimated numbers of dependants.<sup>28</sup> The late 1940s saw the first genuine enumerations, which were higher than expected, either suggesting population growth during the 1920s and 1930s or massive underestimation in the earlier censuses.<sup>29</sup> Often, a combination of the two effects has been assumed, based in part on the wider archive of population discourse from the interwar period. Yet that archive, as Kuczynski warned, was based as much on colonial and African hopes and fears as it was on real evidence.<sup>30</sup>

Regardless, the archive has been used to affirm both natalist and antinatalist views of the interwar period. In Tanganyika, reduced child mortality was identified by comparing local studies from ‘the early colonial years . . . [which] lead one to suspect that nearly half the children born in early colonial Tanganyika died’ with the 1948 territory-wide census which found that, for women who had completed childbearing, about one-third of the children they had ever borne had died by the enumeration date.<sup>31</sup> Yet the earlier estimate is an average of surveys from that time, which varied widely from 20 to 80 per cent mortality, suggesting huge regional variation, unreliability, or wildly different ways of defining ‘child’ mortality.<sup>32</sup>

The basis of the rising fertility claim is also tenuous. Mark Dawson noted in Kenya that ‘since the reduction in mortality in the 1930s and 1940s alone cannot fully account for a surge in population, Kikuyu fertility must have changed’.<sup>33</sup> In Tanganyika, ‘evidence’ of a fertility rise was found by comparing the 1931 and 1948 censuses, despite the former being a known underestimate.<sup>34</sup> Borrowing from European history, Gavin Kitching proposed that protoindustrialisation in interwar East Africa enabled cash-rich young men to bypass their elders in bridewealth accumulation, facilitating earlier marriage and increasing fertility.<sup>35</sup> But there is no quantitative evidence on marriage age to support the hypothesis.

The lack of reliable pre-1950 data led Patrick Manning to take a modelling approach to past population trends by back-projecting 1950s estimates.<sup>36</sup> He implemented ‘situational assumptions’

<sup>26</sup>As summarised in Doyle, ‘Demography and disease’, 44.

<sup>27</sup>R. Kuczynski, *Demographic Survey of the British Colonial Empire, Volume II* (London, 1949), 124–5; R. Kuczynski, *Colonial Population* (Oxford, 1937), xii–xiii.

<sup>28</sup>B. Fetter, ‘Demography in the reconstruction of African colonial history’, in B. Fetter (ed.), *Demography from Scanty Evidence: Central Africa in the Colonial Era* (London, 1990), 12.

<sup>29</sup>C. Martin, ‘Some estimates of the general age distribution, fertility and rate of natural increase of the African population of British East Africa’, *Population Studies*, 7:2 (1953), 181–99.

<sup>30</sup>Samuël Coghe describes how interpretation of demographic data was tempered by perceptions of population crisis and decline before the 1940s, with reference to Angola. See, S. Coghe, ‘Tensions of colonial demography: depopulation anxieties and population statistics in interwar Angola’, *Contemporanea*, 18:3 (2015), 472–8.

<sup>31</sup>J. Koponen, ‘Population: a dependent variable’, in G. Maddox, J. Giblin, and I. Kimambo (eds.), *Custodians of the Land: Ecology and Culture in the History of Tanzania* (Athens, OH, 1996), 19–42, esp. 29.

<sup>32</sup>*Ibid.* 40.

<sup>33</sup>Dawson, ‘Health, nutrition’, 212.

<sup>34</sup>J. Koponen, ‘Population growth in historical perspective: the key role of changing fertility’, in J. Boesen, K. Havnevik, J. Koponen, and R. Odgaard (eds.), *Tanzania: Crisis and Struggle for Survival* (Uppsala, 1986), 31–57.

<sup>35</sup>G. Kitching, ‘Proto-industrialization and demographic change: a thesis and some possible African implications’, *The Journal of African History*, 24:2 (1983), 221–40.

<sup>36</sup>P. Manning, ‘African population: projections, 1850–1960’, in K. Ittman, D. Cordell, and G. Maddox (eds.), *The Demographics of Empire: The Colonial Order and the Creation of Knowledge* (Athens, OH, 2010), 245–75.

governing past growth in different regions, including the likely impact of famine, epidemics, income, migration, slavery, and colonial disorder. He applied Indian rates of growth, arguing they best represented African circumstances. The projections yielded a total population of 175 million in 1930, 25 per cent higher than the 'consensus' of 140 million previously suggested.<sup>37</sup> Compared with the estimated total of 220 million in 1950, this represents a large downward revision of interwar growth rates. Manning's projection of total population in 1850 was 140 million, 50 per cent higher than earlier estimates.<sup>38</sup>

Ewout Frankema and Morten Jerven have questioned the assumptions underpinning Manning's models, including the reliance on Indian growth rates, the acceptance of the 1950s figures, and the adoption of the same periodisation of the impact of the colonial encounter between 1880 and 1920 in East and West Africa.<sup>39</sup> They propose adjusted estimates, using Manning's model but allowing more flexibility in selecting appropriate growth rates, varying assumptions about the timing of the colonial impact, and revising upward the 1950 estimates by 10 per cent. The conclusions are similar, indicating a total population of approximately 114 million in 1850 and 166 million in 1930, compared with 240 million in 1950, although they suggest a smoother increase in population growth after 1920.

As John Caldwell and Thomas Schindlmayr warned in 2002, long-term back-projections in contexts where observed data are sparse can lead to 'unwarranted circularity between the analytical approach and the major findings'.<sup>40</sup> Referring to earlier attempts to understand Africa's place in global population history, they described how the assumption of homeostasis arose from a lack of understanding about the dynamism of precolonial agriculture (notably the expansion southwards of the Neolithic revolution and the introduction of new crops) and an overestimate of the impact of slavery. Manning's work, and Frankema and Jerven's revisions, are huge advances on these earlier estimates and have revitalised the debate, but the very long-range projections will still tend to amplify their assumptions. Manning plans to produce a revised set of projections for pre-1850 African populations based on these higher estimates of 1850 populations. He notes that 'it is clear that, for 1700, they will show African continental population totals substantially higher than the commonly cited figure of 100 million; further they will show very low and sometimes negative growth rates for the eighteenth century', coinciding with the height of the Atlantic slave trade.<sup>41</sup>

### Reconstructing the origins of population growth: Tanganyika

Demographic projections are most reliable in the years closest to their start date (in Manning's case, 1950), and an enduring legacy of Manning's model may be his perception of lower growth in the 1920s and 1930s than assumed previously. However, it is not necessary to rely on projections to reconstruct demography in this period. Equally, we do not need to use the unreliable censuses conducted in the 1920s and 1930s. Instead, we can look to a suite of important and widely-used demographic techniques designed by Bill Brass and others to deal with typical errors and inconsistencies in African censuses, as well as the characteristic recall and underreporting errors in data from older women.<sup>42</sup> For the twentieth century, these methods have the advantages over projections of being rooted in observed cohort data and of being designed to deal with data errors common to

<sup>37</sup>J. Caldwell and T. Schindlmayr, 'Historical population estimates: unravelling the consensus', *Population and Development Review*, 28:2 (2002), 183–204.

<sup>38</sup>Manning, 'African population'.

<sup>39</sup>E. Frankema and M. Jerven, 'Writing history backwards or sideways: towards a consensus on African population, 1850–2010', *The Economic History Review*, 67:4 (2014), 907–31.

<sup>40</sup>Caldwell and Schindlmayr, 'Historical population estimates', 187.

<sup>41</sup>Manning, 'African population', 246.

<sup>42</sup>W. Brass et al., *The Demography of Tropical Africa* (Princeton, 1968); T. Moultrie et al. (eds.), *Tools for Demographic Estimation* (Paris, 2013).

sub-Saharan Africa. We can apply these techniques to cohort data for older women from the late colonial censuses and beyond and situate the (corrected and adjusted) estimates for these older women backward in time according to their birth date in order to understand demographic trends from the 1920s onwards.<sup>43</sup> Application of these techniques is not straightforward because the late colonial censuses have some quirks: data are presented in nonstandard age bands and infant mortality and fertility figures are presented for large age groups that themselves need to be disaggregated using models.<sup>44</sup> But through this work we can obtain estimates of fertility and mortality from the 1920s onwards, grounded in observations of midcentury censuses and adjusted on the basis of post-colonial censuses and surveys.

By applying Brass methods to the 1948 and 1957 Tanganyikan censuses and subsequent censuses and demographic surveys through the 1990s, I found clear evidence that the increase in fertility and child survival did not begin until the 1940s.<sup>45</sup> Fertility was around 4.5 births per woman for women born during the 1900s and 1910s; it began to rise for birth cohorts of women from the 1920s onwards, up to around 7 births for women born in the 1940s. This translates into a fertility rise from 4.5 to 7 births between the 1940s and 1970s, when women in those cohorts were of childbearing age. Mortality among children under five years of age was around 320 per 1000 births during the interwar period, and it declined steadily from then onwards, reaching about 130 per 1000 births in the 1990s. The methods are replicable elsewhere, provided that censuses contain information on current fertility (births in the last year), lifetime fertility (children ever born), and the number of children surviving.

The macro-level analysis reveals little about the determinants of demographic change. To understand these factors, I turned to micro-level analysis of parish registers. Church records have been a crucial source for European historical demography before modern vital registration and censuses.<sup>46</sup> Parish records of baptism, marriage, and burial can be linked through a process known as family reconstitution to obtain complete life histories for individuals, including birth, marriage, fertility histories, and death. Family reconstitution addresses the core challenge in using parish data for demography. Because registration only relates to parishioners, there exists an unavoidable lack of knowledge on the total population — the crucial denominator for calculating demographic rates. The reconstruction of fertility histories provides a measure of observation time which can be used as the denominator in place of the total population. Family reconstitution also assures internal consistency by following rigorous ‘logical checking’ of the data (for example, ensuring internal consistency between dates).<sup>47</sup>

I conducted family reconstitutions in four of the oldest and largest parishes in the interior of Tanganyika — Bukumbi, Kagunguli, Bugando, and Kome Island (in today’s Mwanza and Geita Regions), which were all founded by the White Fathers (now known as the Missionaries of Africa). The reconstitution conducted within each parish was based on nominal record linkage between the baptism, marriage, and death registers.<sup>48</sup>

<sup>43</sup>See S. Walters, ‘Fertility, mortality and marriage in northwest Tanzania, 1920–1970: a demographic study using parish registers’ (unpublished PhD thesis, University of Cambridge, 2008), esp. chs. 5 and 6.

<sup>44</sup>C. Martin, ‘The East African population census, 1948: planning and enumeration’, *Population Studies*, 3:3 (1949), 303–20. Zanzibar’s census was conducted separately until the unification of Tanzania in 1964. On using stable population models to create standard age groupings see Walters, ‘Fertility’, 224. I used the 5 per cent sample census of 1957 for age-specific data on current fertility.

<sup>45</sup>The methods are detailed in full in Walters, ‘Fertility’; see 156–8 for detail on the reconstruction of fertility using the Gompertz relational model and 223–8 on estimating child mortality using indirect estimation.

<sup>46</sup>E. Wrigley, R. Davies, J. Oeppen, and R. Schofield, *English Population History from Family Reconstitution, 1580–1837* (Cambridge, 1997).

<sup>47</sup>E. Wrigley, ‘Family reconstitution’, in E. Wrigley, D. Eversley, and P. Laslett (eds.), *An Introduction to English Historical Demography* (London, 1966).

<sup>48</sup>On conducting record linkage with these data, see Walters, ‘Fertility’, ch. 1.



The resulting Mwanza Historical Demographic Database contains approximately 60,000 individuals with linked records of birth, marriage, and death for the years 1920–70. I analysed fertility, marriage age, birth intervals, and child mortality using event history analysis. Mostly, the microdata agreed with the national-level trends. Fertility was fairly constant in the interwar period and began to rise in the 1940s. There is some evidence that child mortality began to decline in these parishes in the 1930s, slightly earlier than in the national-level analysis, but the mortality decline accelerated from the 1940s.<sup>49</sup> Birth intervals were stable or even widened slightly in the interwar period to around 32 months. From the 1940s there was a decline in spacing, and the median birth interval (for birth orders one to four) fell from 32 to 28 months between the 1940s and 1970s. This quickening in the pace of reproduction coincided with the national-level fertility rise. The decline in spacing happened earlier in Bugando parish in Mwanza town than in rural Bukumbi, or in Kagunguli (Ukerewe) and Kome island parishes. These trends are reinforced by contemporary observations from anthropologists who also noted that intervals declined around a decade earlier in urban than in rural areas in 1960s Mwanza.<sup>50</sup> A survey from that time showed that educated women in Mwanza town were weaning their babies four months earlier than educated rural women in Bukumbi and nearly nine months earlier than uneducated rural women.<sup>51</sup>

The decline in spacing may have resulted partly from Catholic policies to erode long periods of postdelivery sexual abstinence and extended breastfeeding. Priests linked extended abstinence with extramarital relationships and polygamy, which were considered the ‘chief stumbling block’ to Catholicism in East Africa.<sup>52</sup> Comparative research on birth spacing in Central Africa indicates that missionary concerns were not limited to Tanganyika. In Chilubula, Northern Rhodesia, one missionary described the widespread belief at the turn of the century that a breastfeeding infant would die if the mother conceived while still nursing, noting that ‘as a child depends on its mother’s milk for at least two years, it simply means that a husband cannot have normal free sexual relations with his wife for the duration, and this creates a situation in which polygamy is a least evil, as it were.’<sup>53</sup> Nancy Rose Hunt has described similar campaigns in Belgian Congo, where the interests of Catholic missionaries and the labour demands of mining companies coincided in trying to reduce extended breastfeeding and postdelivery abstinence.<sup>54</sup>

Declining rates of secondary subfertility likely also contributed to declining birth intervals in Mwanza, although it is not possible to evaluate this with parish registers.<sup>55</sup> Contrary to Kitching’s thesis, I found no evidence for declining marriage age in Mwanza during the interwar period. Marriage age fell for rural men from the 1940s, but it is unlikely this would have increased fertility significantly. For women, marriage age rose from the 1940s, and earliest in the urban parish. Rising marriage age may have been driven by a rise in bridewealth or by the growth of opportunities through education and employment.<sup>56</sup>

The concurrence of the parish microdata, the national-level analysis, and contemporary observations gives reassurance that fertility was fairly constant in interwar Tanganyika and that child

<sup>49</sup>*Ibid.* See ch. 6 on child mortality.

<sup>50</sup>G. Lang and M. Lang, ‘The Sukuma of northern Tanzania’, in A. Molnos (ed.), *Cultural Source Materials for Population Planning in East Africa, Volume III: Beliefs and Practices* (Nairobi, 1973), 224–33, esp. 229.

<sup>51</sup>C. Varkevisser, ‘The Sukuma of northern Tanzania’, in Molnos, *Cultural Source Materials*, 234–48, esp. 234–5.

<sup>52</sup>Tanzania National Archives, Dar es Salaam (TNA) V10/20298, E. C. Baker, ‘Report on administrative and social conditions on Ukerewe, Volume I’, 1931.

<sup>53</sup>‘Kilubula: report from the staff for 1905’, *Chroniques Trimestrielles*, 84:129 (July 1906). See also, R. Schoenmaeckers, ‘The child-spacing tradition and the postpartum taboo in tropical Africa: anthropological evidence’, in H. Page and R. Lesthaeghe (eds.), *Child-Spacing in Tropical Africa: Traditions and Change* (New York, 1981), 25–71.

<sup>54</sup>N. Hunt, ‘“Le bébé en brousse”: European women, African birth spacing and colonial intervention in breast-feeding in the Belgian Congo’, *International Journal of African Historical Studies*, 21:3 (1988), 401–32.

<sup>55</sup>U. Larsen, ‘Primary and secondary infertility in Tanzania’, *Journal of Health and Population in Developing Countries* (July 2003), 1–15.

<sup>56</sup>Walters, ‘Fertility’, ch. 4.

mortality was falling slightly among Christians in the 1930s, but it also suggests that the child mortality decline became more widespread and significant in the 1940s, coupled with a dramatic rise in fertility sustained through the 1970s and driven by declining birth intervals and improved sexual and maternal health, and despite rising marriage age for women. What is lacking is information on adult mortality trends. Death recording in church records was variable, even for parishes founded by the same missionary organisation.<sup>57</sup> For the White Fathers, recording was better in those parishes which employed *status animarum* — states of souls registers, or ‘touring cards’, which contained linked vital data for families, similar to the family books kept in Lutheran parishes. Lutheran parish registers in Namibia showed evidence of a reduction in the fluctuations in adult death in the interwar period, which the authors interpreted as a possible decline in crisis mortality, although overall mortality decline was greatest after 1950.<sup>58</sup>

Three key points emerge from the macro- and micro-level analyses of demographic trends in Tanganyika. First, the upturn in fertility and major downturn in child mortality occurred in the 1940s. An earlier onset of decline in adult mortality is possible. Perhaps more importantly, the interrelationships between child survival and fertility, and evidence of ‘zig-zag’ change (varying trends in marriage age and interwar birth intervals for example), raise questions about seeking so-called ‘origins’ of population growth.<sup>59</sup> Finding the ‘onset’ might allow us to understand context and hypothesise cause, but demographic change can be a slow burner. The pattern of birth spacing for example suggests a birth cohort effect: shortening intervals in the 1940s occurred first among younger women who were growing up under the influence of the mission in the 1920s and 1930s. Hence, even if change occurred in the 1940s, the roots could have been earlier.<sup>60</sup> Similarly, the 1940s child mortality decline coincided with improved access to antibiotics and vaccinations, but interwar increases in living standards and maternal health may also have been important. The decline in child mortality and birth spacing may also have been interrelated if birth spacing was practiced partly to maximise child survival. In other words, it is likely that both natalist and antinatalist arguments are correct to some degree. But the focus on the 1920s and 1930s has detracted attention from the significance of the post-1940 fertility rise.

Second, the timing of trends in marriage and birth spacing were different in rural and urban parishes, emphasising the significance of regional variation. Romaniuk showed huge regional diversity in fertility in Belgian Congo in the 1930s to 1960s, much of which he attributed to differences in secondary subfertility.<sup>61</sup> Shane Doyle’s comparative study of Ankole, Buganda, and Buhaya adds further weight to the need for microhistory, unseating universalising discourses of African demographic exceptionalism.<sup>62</sup> He showed how investment in lineage expansion did not necessarily equate to growth in fertility and that social reproduction was construed as a wider balancing of property, production, and family relationships, with different demographic outcomes in the three societies.<sup>63</sup> Microdemographies that illustrate local ideologies and institutions governing social reproduction and fertility are needed alongside analysis of the macro-level trends.

<sup>57</sup>S. Walters, ‘Counting souls: towards a historical demography of Africa’, *Demographic Research*, 34: (2015), 63–108.

<sup>58</sup>V. Notkola, I. Timaeus, and H. Siiskonen, ‘Mortality transition in the Ovamboland region of Namibia, 1930–1990’, *Population Studies*, 54:2 (2000), 153–67. The quality of death recording should be a criterion in the selection of parishes for future work.

<sup>59</sup>On fluctuations in marriage age, see M. Wilson, ‘Zig-zag change’, *Africa*, 46:4 (1976), 399–409.

<sup>60</sup>See ch. 5 in Walters, ‘Fertility’.

<sup>61</sup>A. Romaniuk, ‘Increase in natural fertility during the early stages of modernization: evidence from an African case study, Zaire’, *Population Studies*, 34:2 (1980), 293–310. See also U. Larsen, ‘Levels and trends in infertility in sub-Saharan Africa’, in J. Boerma and Z. Mgalla (eds.), *Women and Infertility in Sub-Saharan Africa: A Multi-disciplinary Perspective* (Amsterdam, 2001), 25–69.

<sup>62</sup>S. Doyle, *Before HIV: Sexuality, Fertility and Mortality in East Africa, 1900–1980* (Oxford, 2012).

<sup>63</sup>See also S. Feerman, review of *Before HIV: Sexuality, fertility and mortality in East Africa, 1900–1980*, by S. Doyle, *Medical History*, 60:4 (2016), 568–71.

Third, the large, sustained Tanzanian fertility rise between the 1940s and 1970s is important. Midcentury fertility rises have been identified elsewhere, for example in Kenya between the 1920s and 1970s, in Belgian Congo between the 1930s and 1960s, and from at least the 1950s in Nigeria and Ghana.<sup>64</sup> A 'pre-decline' rise in fertility is considered a step in demographic transition, occurring after child survival improves but before the cost of childrearing increases. Tim Dyson and Mike Murphy analysed pre-decline rising fertility in Africa.<sup>65</sup> Using World Fertility Survey data, they show rising fertility from at least the 1950s in many countries, stating it could have accounted for nearly half of total African population growth from the 1950s to the 1980s. In their 1985 paper, they described their conclusions as 'admittedly tentative' because of the lack of vital registration data to corroborate findings.<sup>66</sup> They called for more historical demography to ascertain whether the 'very high levels of fertility currently estimated for sub-Saharan Africa . . . are a temporary phenomenon — the result of a recent rise'.<sup>67</sup>

Given the extent of midcentury rising fertility across the region, it is surprising that it is absent from many accounts of twentieth-century demographic change. While the prospect of post-1940s rising fertility was flagged by both Iliffe and Caldwell, their focus was on the interwar 'origins'. The post-1940 rise is not mentioned in Dominique Tabutin and Bruno Schoumaker's influential study of African demography from 1950 to 2000, nor is it described in the accounts of Manning or Frankema and Jerven.<sup>68</sup> Frankema and Jerven note that 'the pace and the timing of the decline in (infant) mortality rates has outweighed and preceded the decline in fertility rates. . . . [A]s a result of the former, the majority of countries in sub-Saharan Africa reached a peak rate of population growth between 1960 and 1990', thereby crediting mid-twentieth-century population growth to falling mortality.<sup>69</sup>

Societies across the world have experienced birth order (parity)-specific and age-specific fertility decline, with fertility falling particularly sharply among young women seeking to avoid premarital pregnancy in contexts where marriage age was rising and among older mothers seeking to cease childbearing once desired family size had been achieved. In Africa, by contrast, Caldwell, Orubuloye, and Caldwell argued that fertility decline would be experienced by women at all maternal ages and parities, driven by widening birth intervals.<sup>70</sup> They saw the roots of this trajectory in pronatal, religiocultural institutions and modes of sexuality which arose in contexts of historically high mortality and hostile environments.<sup>71</sup> There has been ongoing debate about the degree of 'exceptionalism' in African fertility decline.<sup>72</sup> Lengthening birth intervals have been central to the decline of fertility in many (although not all) parts of Africa, and while intervals have also lengthened elsewhere, their non-parity-specific and non-age-dependent character has been especially important in the region. Scholars have argued that the patterning of birth intervals in the region

<sup>64</sup>B. Brass and C. Jolly, 'Fertility trends', in B. Brass and C. Jolly (eds.), *Population Dynamics of Kenya* (Washington, DC, 1993), 51–91; Romaniuk, 'Increase', 296; S. Gaisie, 'Some aspects of fertility studies in Ghana', in J. C. Caldwell and C. Okonjo (eds.), *The Population of Tropical Africa* (New York, 1968), 245; P. Olusanya, 'Modernisation and the level of fertility in Western Nigeria', in IUSSP International Population Conference (London, 1969).

<sup>65</sup>T. Dyson and M. Murphy, 'The onset of fertility transition', *Population and Development Review*, 11:3 (1985), 399–440.

<sup>66</sup>*Ibid.* 430n54.

<sup>67</sup>*Ibid.* 431. The extent of the rise in Africa calls into question its classification as a 'pre-decline' rise, a point given added weight by current stalls in fertility decline.

<sup>68</sup>D. Tabutin and B. Schoumaker, 'The demography of sub-Saharan Africa from the 1950s to the 2000s', *Population* (English edition), 59:3–4 (2004), 457–555.

<sup>69</sup>Frankema and Jerven, 'Writing history backwards or sideways', 917–18.

<sup>70</sup>J. Caldwell, I. Orubuloye, and P. Caldwell, 'Fertility decline in Africa: a new type of transition?', *Population and Development Review*, 18:2 (1992), 211–42.

<sup>71</sup>See also J. Caldwell, 'The cultural context of high fertility in sub-Saharan Africa', *Population and Development Review*, 13:3 (1987), 409–37.

<sup>72</sup>T. Moultrie, T. Sayi, and I. Timaeus, 'Birth intervals, postponement, and fertility decline in Africa: a new type of transition?', *Population Studies*, 66:3 (2012), 241–58; I. Timaeus and T. Moultrie, 'Pathways to low fertility: 50 years of limitation, curtailment, and postponement of childbearing', *Demography*, 57:1 (2020), 267–96.

suggests that they may be driven not by the desire to limit overall numbers of children or to ensure a specific interval, but rather by the decision not to have another birth right now.<sup>73</sup> Those decisions, or postponed decisions, are contingent on the immediate personal, economic, and political contexts in which they are made, representing a flexibly strategic approach to family building in contexts of uncertainty.<sup>74</sup> Precarity and vulnerability influence the decision not to have a birth right now, and with available modern contraception those decisions express themselves as long birth intervals and reduced fertility.<sup>75</sup> In this view, fertility decline in Africa might be occurring even in the context of large family size preferences, with birth control used to optimise maternal and child health and survival or to postpone childbearing until better times — a situation which shakes assumptions about the inevitable and linear process of fertility transition.<sup>76</sup>

The unanswered question is how the large and sustained pre-decline rise in fertility fits against this picture of exceptionalism in fertility decline. In many accounts of fertility transition, the pre-decline rise is not acknowledged at all. Indeed, in the Changing African Family Project, pre-decline fertility was presented as 'stable' and 'high'.<sup>77</sup> Demographers, following Caldwell, Orubuloye and Caldwell, have sometimes emphasised rather static 'traditional pronatalist social, economic, and cultural practices' as the 'explanation' for continuing high fertility preferences in the region.<sup>78</sup> But a key question to ask is why intervals should have declined from the 1940s to the 1970s, only to widen again in the 1980s. There is an issue about whether these transitions have the same drivers — the desire to maximise reproductive success — and whether the independent variable has been social and technological enablers. Did the twentieth-century fertility rise represent a 'loss of control' over reproduction through the erosion of traditional institutions and knowledge in the context of changing gender and generational relations, and has the availability of modern contraception enabled the resumption of control?<sup>79</sup> Or are contemporary trends driven by an entirely different set of agendas conditioned by contingent circumstances, modern schooling, and the status of women?<sup>80</sup>

Cheikh Mbacké argues that 'understanding the African social supports for high fertility as a rational response to historical circumstances and not a peculiar expression of African cultures and social organization is a necessary condition both for advancing demographic transition theory and for designing culturally sound family planning programs'.<sup>81</sup> Specifically, addressing the rise, fall, and stall in fertility in the second half of the twentieth century is important. Mbacké's despair about 'the ignorance of African history by students of population and particularly demographers, be they Africans or Africanists' is a warning, and it is crucial that at least some future projects on long-term demographic trends are grounded in micro-level studies. As Doyle shows, reductionist narratives of 'natalism' will not suffice; cultures of reproduction and sexualities are oriented in specific social, economic, and epidemiological circumstances, and they are distinct even between neighbouring societies.<sup>82</sup> Mbacké goes on: 'the major argument of detractors of the study of African historical demography—the lack of data—is patently weak. Of course, data similar to those used in the

<sup>73</sup>Moultrie, Sayi, and Timaeus, 'Birth intervals'.

<sup>74</sup>J. Trinitapoli and S. Yeatman, 'The flexibility of fertility preferences in a context of uncertainty', *Population and Development Review*, 44:1 (2018), 87–116.

<sup>75</sup>Johnson-Hanks, 'Uncertainty'.

<sup>76</sup>C. Bledsoe, A. Hill, and U. D'Alessandro, 'Constructing natural fertility: the use of Western contraceptive technologies in rural Gambia', *Population and Development Review*, 20:1 (1994), 81–113.

<sup>77</sup>F. Olu Okediji, J. Caldwell, P. Caldwell, and H. Ware, 'The Changing African Family Project: a report with special reference to the Nigerian segment', *Studies in Family Planning*, 7:5 (1976), 126–36.

<sup>78</sup>J. Bongaarts, 'Africa's unique fertility transition', *Population and Development Review*, 43:S1 (2017), 39–58, esp. 55.

<sup>79</sup>Turshen, 'Population growth'.

<sup>80</sup>Johnson-Hanks, *Uncertain Honour*.

<sup>81</sup>C. Mbacké, 'Family planning programs and fertility transition in sub-Saharan Africa', *Population and Development Review*, 20 (1994), 188–93, esp. 192.

<sup>82</sup>Doyle, *Before HIV*.

Princeton project on the European demographic transition are not available, but a huge amount of relevant data does exist and awaits analysis'.<sup>83</sup> In the next section, I consider the promise of parish register data for the further expansion of historical demography in Africa. I described the results of the Tanganyikan study above, and next I consider the extension of this work based on my recent evaluation of 35 parishes in Eastern, Central, and Southern Africa, as well as the wider literature. I utilise the moral demography approach in my analysis and reflect on the value of this framework for population history more widely in the region.

### Data, evidence, meaning: Contributions of moral demography

Work has been ongoing on African parish registers since the 1950s.<sup>84</sup> Studies have been conducted in the Kingdom of Kongo, Burundi, South Africa, Uganda, Tanzania, Namibia, Malawi, and Zambia.<sup>85</sup> They have varied in ambition, ranging from examinations of single registers over short timespans to reconstructed cohort studies to full-scale reconstitutions. The timeframes have ranged from the seventeenth century to the present day, and the parishes studied were founded by a range of missionary societies and denominations. Record keeping varies accordingly, which can affect the scope of analyses.<sup>86</sup> Results have been discussed throughout this paper: for example, evidence that mortality decline was quite modest in the interwar period, but that from the 1940s to the 1950s improved survival played a significant role in population growth, which was also driven by rapidly rising fertility.<sup>87</sup> Explicable, meaningful differences have been identified in the demographic histories of even neighbouring societies, suggesting the need for further micro-level studies.<sup>88</sup> But before expanding this work, it is important to consider the implications of the missionary context for the use and interpretation of these data.

The relative youth of the church in much of Africa implies censoring and compositional effects, precluding demographic reconstruction for the first decades of a new parish. Censoring is a form of missing data wherein the event of interest may be experienced outside of observation time. For example, many early converts were adults who were already married and had children before seeking baptism. Those prior marriages and births were not always documented in the parish record, so marriage age and fertility may be biased unless censoring is factored into analyses. Likewise, there is censoring in recent records, because many people remain alive and so have incomplete life histories. Work is therefore needed to define observation time and inclusion criteria. Additional markers of presence in the parish not related to birth, marriage, and death (the 'events of interest'), such as payment of tithes or attendance at church, can enable the application of event history analysis with appropriate censoring points.

In European historical demography, wider representativeness is claimed of the parish data.<sup>89</sup> A similar claim for representativeness may be valid in some African contexts. Thornton argues that baptism was universal in the Kingdom of Kongo, even if there was variation in the extent to

<sup>83</sup>Mbacké, 'Family planning', 192.

<sup>84</sup>A. Nhonoli, 'An enquiry into the infant mortality rate in rural areas of Unyamwezi', *The East African Medical Journal*, 31 (1954), 1–12.

<sup>85</sup>V. Notkola and H. Siiskonen, *Fertility, Mortality and Migration in SubSaharan Africa: The Case of Ovamboland in North Namibia, 1925–90* (Basingstoke, UK, 2000); S. Doyle, 'Population decline and delayed recovery in Bunyoro, 1860–1960', *The Journal of African History*, 41:3 (2000), 429–58; Doyle, *Before HIV*; J. Katzenellenbogen, D. Yach, and R. Dorrington, 'Mortality in a rural South African mission, 1837–1909: an historical cohort study using church records', *International Journal of Epidemiology*, 22:6 (1993), 965–75; G. Feltz, 'Catholic missions, mentalities and quantitative history in Burundi 1990–1962', in B. Fetter (ed.), *Demography from Scanty Evidence* (Boulder, CO, 1990); Thornton, 'Demography and history'; Walters, 'Counting souls'.

<sup>86</sup>Walters, 'Counting souls'.

<sup>87</sup>Notkola, Timaeus, and Siiskonen, 'Mortality transition'; Walters, 'Fertility'.

<sup>88</sup>Doyle, *Before HIV*.

<sup>89</sup>Wrigley, Davies, Oeppen, and Schofield, *English Population History*.

which Catholicism was embraced, and hence he scales up from the baptism records to the wider population.<sup>90</sup> In general, there are several reasons against generalisation from parish records in Africa. At least in the early years of a new parish, converts were not ‘typical’ of wider populations. In Bukumbi, Tanganyika, there was a preponderance of freed slaves, runaway women, and orphans, and this was quite typical of late nineteenth-century missions.<sup>91</sup> Nancy Rose Hunt has noted that even in regions of mass Catholic conversion, such as Belgian Congo, the early converts tended to come primarily from ‘subordinated rather than dominant groups’.<sup>92</sup> Missionaries deliberately selected vulnerable populations in choosing mission locations, perceiving that their medicines, food, and firepower would have even greater power to attract people to the church.<sup>93</sup>

Missionary criteria for the siting of new missions were selective, including geographic factors such as the potential for agriculture and suitability of the soil for brickmaking, as well as the ‘healthiness’ of the site and the distance from other missions.<sup>94</sup> Places were chosen based on the perceived potential for conversion of the local population, including apparent monotheism and monogamy.<sup>95</sup> For example, in Rosa mission site in Northern Rhodesia, Father Tanguy noted that ‘there [we]re many good, solid couples around the villages, quite in accordance with the Christian teaching on marriage, and . . . the idea of indissolubility [of marriage] was traditionally quite acceptable, if not practised.’<sup>96</sup> Missions were further established in areas with relatively settled populations that were less prone to migratory labour.<sup>97</sup> For example, missionaries thought that Kawambwa had potential as a mission site because the people had an ‘advantage’ over ‘our roaming BaBemba: they are stable, they do not shift their villages every now and then in search of trees. The reason is that all their villages are built on the banks of rivers and huge marshes teeming with fish.’<sup>98</sup>

Furthermore, missionary competition in the region was considered ‘one more reason to implant a mission station of ours right in the heart of the district before it is totally won over to Protestantism’.<sup>99</sup> This early mission geography implies selection effects in Christian populations in the founding decades. Selectivity is likely compounded over time by the concentration of educational and medical institutions near missions and the wider legacy of mission stations for economic development.<sup>100</sup> As a result, there is a risk that apparent shifts in demographic outcomes actually reflect ‘compositional effects’, wherein the characteristics of individuals recorded in the records were changing over time.

Another potential critique of using church records for historical demography is that they might only record individuals and structures which conform to Christian expectations. Family reconstitution can then only reconstruct family as imagined and condoned by the church. The registers were structured to reflect the Christian ideal of stable, monogamous matrimony and the assumption of

<sup>90</sup>Thornton, ‘Demography and history’.

<sup>91</sup>Walters, ‘Fertility’, 25.

<sup>92</sup>N. Hunt, *A Colonial Lexicon of Birth Ritual, Medicalization, and Mobility in the Congo* (Durham, NC, 1999), 43. Derek Peterson has also shown how early converts in Kikuyuland were often land-poor young men, see D. Peterson, ‘“Be like firm soldiers to develop the country”: political imagination and the geography of Gikuyuland’, *The International Journal of African Historical Studies*, 37:1 (2004), 71–101, esp. 75.

<sup>93</sup>Mambwe diary, 25 January 1893’, *Chroniques Trimestrielles*, 10:60 (October 1893).

<sup>94</sup>R. Jedwab, F. Meier zu Selhausen, and A. Moradi, ‘The economics of missionary expansion: evidence from Africa and implications for development’, Centre for the Study of African Economics, Working Paper Series 2018–07, University of Oxford, 2019; Fr Guillerme, ‘Kilubula’, *Chroniques Trimestrielles*, 57:108 (July 1904); Faith and Encounter Centre Zambia, Lusaka (FENZA) 5-ZWF-MD 64, Fr Mazé’s translation of Mambwe diary, 8 June 1895.

<sup>95</sup>‘Kilubula: report from the staff for 1905’, *Chroniques Trimestrielles*, 84:129 (July 1906).

<sup>96</sup>FENZA 4-WF-PE 66, translation of *Petit Echo*, 66:119 (1923).

<sup>97</sup>Mambwe diary, 27 April 1893’, *Chroniques Trimestrielles*, 10:60 (October 1893).

<sup>98</sup>FENZA 5-ZWF-MD 60, translation of Chilubula diary, 7 July 1909.

<sup>99</sup>*Ibid.*

<sup>100</sup>F. Meier zu Selhausen, M. van Leeuwen, and J. Weisdorf, ‘Social mobility among Christian Africans: evidence from Anglican marriage registers in Uganda, 1895–2011’, *Economic History Review*, 71:4 (2017), 1291–321; N. Nunn, ‘Religious conversion in colonial Africa’, *American Economic Review: Papers and Proceedings*, 100:2 (2010), 147–52.

biological parentage.<sup>101</sup> But, as one missionary noted in Chilubula, the people did not necessarily 'have the same ideal as we have. Polygamy is part of the tradition. . . . Another problem in marriage . . . is the ease with which the couples separate when they have grown tired on each other. . . . One good point in the family traditions of our BaBemba: an orphan is never abandoned', referring to the common practice of fostering by relatives.<sup>102</sup> Differences between missionary expectations and local realities raise questions about whether church registers truly capture African family structures and how those structures changed over time.

Missionaries also worked to engender 'Christian' ways of being and reproducing in these parishes. They censured (or excommunicated) converts for extramarital or polygamous relationships, and they tried to reform practices which they saw as un-Christian. Missionaries in Mwanza campaigned against rising bridewealth, which was perceived as a barrier to marriage that could lead to premarital sex.<sup>103</sup> They also fought against dances which they associated with promiscuity, and tried to change female initiation institutions, such as the *maji* (shared dormitories), where sex and marriage education took place.<sup>104</sup> Similar examples of missionary intervention in intimate lives exist in parishes across the region.<sup>105</sup>

Therefore, the problem is not only how to capture African realities using sources which are structured to reflect Christian ideals, but also how to measure change over time using sources designed by the agents promoting change and which excluded individuals who failed to conform — a situation which raises issues of hegemony and ethics that go beyond simple demographic analyses.<sup>106</sup> The question is whether we can critically evaluate categories and events in the parish record while also using it to generate demographic rates.

Critical reconstruction is possible for two reasons. First, the conversation between priests and people about Christianity, morality, and family life has left a rich seam in the archives which can be unpicked alongside the quantitative data to understand processes of change.<sup>107</sup> Second, priests often kept detailed track of the 'transgressions' of their parishioners directly in the parish record, making it possible to integrate them into analyses. In parishes in Northern Rhodesia and Nyasaland founded by the White Fathers, priests recorded the actual living arrangements of families, including absent spouses, runaway children, and additional wives, in 'states of souls' registers. In the Tanganyikan parishes, 'touring cards' performed a similar function. White Fathers judged the 'depth' of Christianity by assessing the degree to which people were conforming to Catholic moral codes around family life and reproduction.<sup>108</sup> Hence, these registers were used by priests to assess the success of their work and the 'depth' of conversion, and also to know who was eligible to receive sacraments.<sup>109</sup> Record keeping was motivated by parishioners as well as priests — in the absence of wider vital registration, parish records have been a crucial tool in people's 'legal' identities, and they

<sup>101</sup>On competing indigenous conceptions of parentage, see R. Stephens, 'Lineage and society in precolonial Uganda', *The Journal of African History*, 50:2 (2009), 203–21.

<sup>102</sup>Kilubula: report from the staff for 1905', *Chroniques Trimestrielles*, 84:129 (July 1906).

<sup>103</sup>B. Larsson, *Conversion to Greater freedom? Women, Church and Social Change in North-Western Tanzania Under Colonial Rule* (Stockholm, 1991), 95; H. Cory, *Sukuma Law and Custom* (London, 1953), 16.

<sup>104</sup>Mwanza Regional Archives, Mwanza, Tanzania (MRA) 10/107/122, address by Fr Langemeyer to the Provincial Education Committee, Mwanza, 7 May 1929; Cory, *Sukuma Law*, 39–40; R. Tanner, 'The sexual mores of the Basukuma', *International Journal of Sexology*, 8 (1955), 238–41.

<sup>105</sup>L. Thomas, *Politics of the Womb: Women, Reproduction, and the State in Kenya* (Berkeley, 2003); Hunt, "'Le bébé'".

<sup>106</sup>S. Szreter, H. Sholkamy, and A. Dharmalingam, *Categories and Contexts: Anthropological and Historical Studies in Critical Demography* (Oxford, 2004).

<sup>107</sup>J. Comaroff and J. Comaroff, *Of Revelation and Revolution, Volume I: Christianity, Colonialism and Consciousness in South Africa* (Chicago, 1991); A. Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton, 2009).

<sup>108</sup>S. Walters, 'Becoming and belonging in African historical demography, 1900–2000', in P. Kreager and A. Bochow (eds.), *Fertility, Conjunction, Difference: Anthropological Approaches to the Heterogeneity of Modern Fertility Declines* (New York, 2017), 72–100.

<sup>109</sup>Walters, 'Counting souls'.

were — and remain — widely embraced.<sup>110</sup> For the historical demographer, such records not only ease linkage for family reconstitution, but also allow analysis beyond the confines of the Christian ideal.

A complicating factor is a decline in detailed recording over time, at least in the Catholic parishes. While early missionaries kept thorough, personal, judgemental accounts of all of their parishioners, there was a gradual shift over time as Christianity became established and as a movement towards ‘inculturation’ (the process of working through rather than against African modalities) gained traction. It is difficult to deal with such a gradual decline quantitatively. A critical approach begins by understanding the shape of these recording trends and their likely explanations. Constructively, we can then restrict observation time in specific parishes when recording practices changed.

There is productive circularity here. Disjuncture in recording practice, as observed in the parish record, leads to studying the changing relationship between church and people, which in turn leads to improved understanding of recording practice and knowing how to censor data from each parish. The shifting relationship between church and people that underscores the changing data formats also implies shifting forces in the creation of social reproduction in Africa because the church moved away from *censuring* local practices and towards working with them. The moral demography approach views parochial registration as both ‘sign’ and ‘symptom’ of wider forces in religion and reproduction in Christian missions in Africa.<sup>111</sup> This reflects the reflexive processes we find in studies of moral economy.<sup>112</sup> Such reflexivity differs from a more standard approach to demographic research, which would verify source reliability and make appropriate adjustments, but with the singular aim of reconstructing demographic rates. In the reflexive approach, rather than trying to control for compositional and selection effects, we work with the subjectivities in the data to reveal underlying mechanisms of ideational change. The aim is to engage with the processes of change, considering the ways in which Christianity gained traction in certain communities; how the church worked to affect reproduction; how people used the church to manage their resilience in response to changing contexts and uncertainty; how arguments about family, morality, and responsibility arose in the contexts of wider social and religious change; and how record keeping was central to the working out of these debates, leaving a textured legacy for demographic reconstruction.

Core to the approach is an understanding that (social) reproduction may not always delineate along demographic lines: people seek to manage their fertility, mortality, and migration within a wider dynamic of contingent circumstances and construal parameters, which themselves are historically grounded but constantly changing.<sup>113</sup> In that view, a drive towards lineage expansion may lead to pronatal ideologies which live alongside sexual conservatism, and in which other assets (property, land, education, wealth, security, governance) and considerations (migration, labour, politics, conflict, nationalism) bear on family-building and demographic outcomes, as Shane Doyle and Steven Feierman have emphasised.<sup>114</sup> Such ideologies and lived realities feature in moral debates enacted through civic and social spheres.<sup>115</sup> Those debates leave trails. Where family formation is morally construed — as in the process of Christian conversion, just as in the growth of rural capitalism — people document their own and others’ experiences as a means of judgement, surveillance,

<sup>110</sup>S. Szreter, ‘The right of registration: development, identity registration, and social security—a historical perspective’, *World Development*, 35:1 (2007), 67–86. Consider parallels in how record books for Mau Mau fighters, ‘established permanent records of virtuous conduct among a people demoralised by class formation’. D. Peterson, ‘Wordy women: gender trouble and the oral politics of the East African revival in Northern Gikuyuland’, *The Journal of African History*, 42:3 (2001), 469–89, esp. 489.

<sup>111</sup>P. Bourdieu, *The Rules of Art: Genesis and Structure of the Literary Field* (Stanford, 1995), xx.

<sup>112</sup>A. Sayer, ‘Moral economy and political economy’, *Studies in Political Economy*, 61: (2000), 79–104.

<sup>113</sup>Spear, *Mountain Farmers*, 11–12.

<sup>114</sup>Doyle, *Before HIV*; Feierman, review of Doyle, *Before HIV*.

<sup>115</sup>Lonsdale, ‘Moral economy of Mau Mau’.



testimony, and proof.<sup>116</sup> In this way, they make themselves and their demographics legible, as long as their contexts are documented and understood.<sup>117</sup>

Moral demography therefore entails 'sustained engagement' with economic anthropology and anthropological demography (echoing Serra and Jerven in this forum) and understanding of the gendered and generational micropolitics that accompany economic change. The greatest potential for African historical demography rests on making critical deconstruction integral to quantitative reconstruction.<sup>118</sup> Only by reading, understanding, and compensating for the power structures in which historical demographic sources are embedded can we realise John Iliffe's promise that demography is a 'sensitive indicator of change, the point at which historical dynamics fuse into an outcome that expresses not merely the actions of elites . . . but the most fundamental circumstances and concerns of ordinary people'.<sup>119</sup> In the concluding section of this essay, I reflect on the prospects for such a turn.

### Future prospects and an agenda for research

'Slow', 'marginal', and 'persistent' is how Dennis Cordell described the ongoing mission, which started with two seminars held at the University of Edinburgh in 1977 and 1982, to document African historical demography by the turn of the twenty-first century.<sup>120</sup> Since then, there has been a steady trickle of research on population history, but Christopher Wrigley's prediction that the Edinburgh meetings may 'indicate the beginning of an intellectual trend, such that population change is likely to succeed state-formation, and external economic relations as the dominant theme of African historiography' has not been realised.<sup>121</sup> There are signs of change. Increasing focus by economic historians on the continent's historical population sources and acknowledgement of the centrality of demography to understanding economic trends has driven a rising number of publications and PhD theses on historical demography in recent years.<sup>122</sup> At the same time, the important contribution of anthropological demographers to understanding the dynamics of fertility transition in Africa has widened awareness of the need for deep contextual understandings, and for history.<sup>123</sup>

Technological and computational advances have also increased the scope of the field. The generation of large collaborative databases for the study of the Atlantic slave trade, through decades of painstaking work, has been a huge resource and inspiration for scholars seeking to understand its demographic impact.<sup>124</sup> Accessibility has been enhanced by the creation of user-friendly interfaces and classroom resources. It is to be hoped that collaborations of similar dynamism will give rise to equivalent tools and resources for later periods and Africa's other slave trades. Scholars can look to previous comparative historical demographic projects for a vision of how a multisite, comparative demographic database could give form and context to a multiplication of microstudies across the continent.<sup>125</sup> The laborious process of data entry may soon be alleviated by machine learning for automated text and table recognition, which would also advance the comparative study of microdemographies across the region.

<sup>116</sup>Peterson, 'Wordy women'. On documentation, see S. Whyte, 'Writing knowledge and acknowledgement: possibilities in medical research', in W. Geissler (ed.), *Evidence, Ethos and Experiment: The Anthropology and History of Medical Research in Africa* (Oxford, 2011), 29–56.

<sup>117</sup>Stoler, *Along the Archival Grain*.

<sup>118</sup>Thereby following an interdisciplinary project suggested by William Sewell to realise the democratising prospect of quantitative social history as envisaged in the 1970s by building on deconstructivist insights of the new cultural turn in the 1980 and 1990s. W. Sewell, *Logics of History: Social Theory and Social Transformation* (Chicago, 2005), esp. ch. 2.

<sup>119</sup>Iliffe, *Africans*, 4–5.

<sup>120</sup>D. Cordell, 'African historical demography in the years since Edinburgh', *History in Africa*, 27 (2000), 61–89.

<sup>121</sup>C. Wrigley, 'Review article: population in African history', *The Journal of African History*, 20:1 (1979), 127–31, esp. 127.

<sup>122</sup>See African Economic History Network, (<https://www.aehnetwork.org>), accessed 14 May 2021.

<sup>123</sup>Bledsoe, *Contingent Lives*; Johnson-Hanks, *Uncertain Honour*.

<sup>124</sup>Slave Voyages: The Trans-Atlantic Slave Trade Database, (<https://www.slavevoyages.org>), accessed 14 May 2021.

<sup>125</sup>T. Bengtsson, C. Campbell, and J. Lee (eds.), *Life Under Pressure: Mortality and Living Standards in Europe and Asia, 1700–1900* (Cambridge, 2004); A. Coale and S. Watkins (eds.), *The Decline of Fertility in Europe: The Revised Proceedings of a Conference on the Princeton European Fertility Project* (Princeton, 1986).

Questions for a future research agenda have been suggested throughout this essay. Adult mortality is a weak link in understanding the origins of African population growth. But it is possible that parish registers may yield new findings, especially if parishes are selected on the basis of the quality and completeness of recording, as well as contextual knowledge of practices of death and dying. Linking parish records to medical registers in Uganda yielded data on mortality, health-seeking, and morbidity; such projects could be expanded especially given the frequent confluence of missions and hospitals.<sup>126</sup> There is also scope for paleodemographic research to contribute to the study of adult mortality over time, and genetic, archaeological, and linguistic findings are already illuminating past trends in African disease environments.<sup>127</sup> Situating demographic data against reconstructed times-series data on climate, food security, epidemics, and socioeconomic change could enable the study of resilience in long-term perspective, as was achieved in the EurAsia project.<sup>128</sup>

More work is needed to document early- to mid-twentieth-century rising fertility in multiple contexts at the macro and micro scale, and to situate that rise and its determinants against later fertility declines and stalls. The late colonial censuses could be used to this end, as could parish registers. Manning's seminal work on back-projection offers other avenues for future work — including refining the underlying parameters and assumptions to create models more specific to particular locations.<sup>129</sup> Manning's own plans to project further backwards to the sixteenth century will offer new insights into the demographic impact of slavery.<sup>130</sup> There is further potential also for analysis of the microdata on slavery contained in the Voyages database, in the Counting Colonial Populations database, and elsewhere. Improving understanding of slave origins will expand the promise of these sources, using linguistics and onomatology to map names and places to the interior.<sup>131</sup> Such work will enable further study of the transformations of slavery in Africa, in terms of institutions, trade, gender, and generational relations, all of which are deeply connected with demographic change.<sup>132</sup>

Successful, significant, historical demographic projects have been driven by collaboration, and the real power of findings has nearly always been in comparative and interdisciplinary perspectives. This multifaceted research agenda calls for a melding of micro and macro approaches and for combining technological know-how and demographic analysis with the historical and anthropological ability to read against the grain and within the margins. 'Devilishly difficult' is how Nancy Howell described the required degree of interdisciplinarity, but it is essential to further development of the field.<sup>133</sup> Such an undertaking could yield rich pickings for social and economic history, as well as improving the documentation of population change. It is towards that vision that we should work in Africa. Mbacké is right — the data exist. We just need to make them speak.

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<sup>126</sup>S. Doyle, F. Meier zu Selhausen, and J. Weisdorf, 'The blessings of medicine? Patient characteristics and health outcomes in a Ugandan mission hospital, 1908–1970', *Social History of Medicine*, 33:3 (2020), 946–80.

<sup>127</sup>S. Chirikure et al., 'What was the population of Great Zimbabwe (CE1000 – 1800)?', *PLoS One*, 12:6 (2017), <https://doi.org/10.1371/journal.pone.0178335>; L. Scheinfeldt, S. Soi, and S. Tishkoff, 'Working toward a synthesis of archaeological, linguistic, and genetic data for inferring African population history', *PNAS*, 107:S2 (2010), 8931–8.

<sup>128</sup>Bengtsson, Campbell, and Lee, *Life Under Pressure*.

<sup>129</sup>Frankema and Jerven, 'Writing history backwards or sideways'.

<sup>130</sup>Manning, 'African population'.

<sup>131</sup>G. Ugo Nwokeji, 'The Atlantic slave trade and population density: a historical demography of the Biafran hinterland', *Canadian Journal of African Studies*, 34:3 (2000), 616–55.

<sup>132</sup>D. Eltis, 'The volume and structure of the transatlantic slave trade: a reassessment', *The William and Mary Quarterly*, 58:1 (2001), 17–46.

<sup>133</sup>N. Howell, 'Toward a uniformitarian theory of human paleodemography', *Journal of Human Evolution*, 5:1 (1976), 25–40.

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