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**Peer learning and health-related interventions: family planning and nutrition in Kenya and Uganda, 1950-2019**

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The beneficial role of formal education in reducing infant and child mortality has long been recognized. Caldwell's seminal 1979 paper played a crucial role in demonstrating that the impact of education could be disaggregated from the socioeconomic status with which it was commonly associated. Education was thought to enhance knowledge of disease prevention, understanding of the mechanisms of curative biomedicine, and women's capacity to shape health-oriented decision-making within the household.[1] The correlation, however, has appeared stronger in some societies than others (Johnson-Hanks 2006, 1-2). As Preston (1985) has argued, the impact of education depends on what is taught. A curriculum which conveys a scientific understanding of disease transmission is key, according to his data. Changing individuals' understanding though depends not only on curricular content, but also on the style, and quality, of teaching. The outcomes of didactic schooling to follow instructions, and conceptual tutoring designed to change behaviours, between what might be termed curative and preventive education, are likely to be significantly different. Various studies have shown, moreover, that the relationship between schooling and health-related attitudes and behaviours is moderated by local cultural, environmental or other contexts (Desai and Alva 1998; John Hobcraft 1993). As Jeffery and Jeffery (1998) have shown with reference to South Asia, schooling does not necessarily enhance female autonomy, teaching is often of such low quality that its impact should be questioned, and the significance of non-institutionalized education is commonly, but incorrectly, underestimated.

[1] See also Iliffe 1995, 244; The World Bank 1993.

This chapter seeks to enhance understanding of the deeper history of this relationship through an analysis of three East African societies over the past seventy years. The Ganda, from Uganda, and the Kikuyu and Luo from Kenya, are among the region's largest ethnic groups. In the 1950s these societies, partly due to their relative educational advancement, dominated their countries' resistance to imperial overrule. Since independence, their fortunes have varied markedly. The Ganda, for example, suffered Africa's first mass rural HIV epidemic, with AIDS mortality escalating rapidly through the 1980s. From around 1991, however, prevalence began to fall, raising hope that large-scale AIDS epidemics elsewhere in Africa could be contained. In practice, replicating Uganda's achievements proved difficult, prompting new research into the factors which had underpinned that country's success. Consensus has still not been achieved, reflecting the deeply politicised nature of the debate. Given the scale of the transformation in fortunes, it seems unlikely that any one intervention should receive sole credit. Both increased abstinence and use of condoms seem key. Direction and an often earthy openness from government, and the ground-level actions of numerous civil society groups, many dating back to the colonial period, together fostered a culture conducive to knowledge transmission and behavioural change. In Kenya, by contrast, AIDS never received the same level of attention. For the Kikuyu, where prevalence remained comparatively low, health-related discussion has focused instead on the growing threats of substance abuse and non-communicable diseases, such as diabetes, each regarded as symptoms of weakening self-discipline. The Luo, meanwhile, experienced Kenya's earliest AIDS epidemic, and continue to suffer the highest prevalence levels in the country. Compared to Uganda, HIV campaigns started late, for many years lacked coherence, and often seemed at odds with popular perceptions of disease causation. For many Luo, decades of economic and political marginalization shape their understandings of health: on the one hand their disadvantages mean they are too poor to suffer significantly from obesity and diabetes, on the other they feel themselves blamed for HIV's persistence, as what are internally defined as traditional practices such as polygyny and widow inheritance are externally categorised

as risk factors (Geissler and Prince, 2010), 261-3; Iliffe, 2006; Kenya National Bureau of Statistics, 259, 263-5). In each of these societies, then, education and health have been politicized in distinctive ways over the decades. In none of these societies has the relationship between education and health outcomes been straightforward. This raises questions about what scale and period of analysis is appropriate in trying to understand this relationship. Sharp variation of experience within each country suggests that cross-national surveys across Africa may be inherently problematic, while local fluctuation over time indicates that ahistorical assumptions about teleological progress need to be reconsidered.

To understand the evolution of health education and its reception over time, it is necessary to think beyond the binary, direct educational experience of teacher and pupil. The institution of the school is crucial, but in part because of its role in creating enduring social networks of peer learning within and beyond groups of former classmates. This chapter focuses on knowledge transmission and processing outside the confines of the school. It examines how behaviours have been changed through the use of concepts and logics that connect to and resonate with individuals' worldviews and felt needs, even if they do not immediately replicate these. This process of vernacularization of biomedical concepts and practices is neither smooth nor organic. In the examples analysed here, the translation of family planning and nutritional programmes varied in terms of both its success in aligning local and external goals, and the level of engagement of medical organizations. The effectiveness of peer learning through associations was shaped in part by the historical development of each society's associational life from the late colonial into the postcolonial periods. It is possible though to tie these recent developments of health-focused peer groups to a much deeper history. In contrast to the western biomedical model of healing, which sought to treat the patient in isolation, in many pre-colonial African societies treatment of illness and management of fertility were communal affairs. In John Janzen's classic study of precolonial central Africa, illness was managed on behalf of the afflicted by 'various maternal and paternal kinsmen, and occasionally their friends and associates'.' This

social network rallied 'for the purpose of sifting information, lending moral support, making decisions, and arranging details of therapeutic consultation. The therapy managing group thus exercises a brokerage function between the sufferer and the specialist' (1978, 4; Janzen 1979, 320).[2] Similarly, in precolonial Buganda, as Neil Kodesh has demonstrated, therapeutic networks powered by clan-based healing ideologies provided the 'discursive and ritual cement joining people . . . to ensure their collective well-being' (2010, 76).

These insights help to explain why interventions such as family planning and maternal and child health have achieved only partial success within many African communities. Providers often seek to isolate individuals from their family and peers, to instruct more than explain, to compel engagement by threatening the refusal of services during future emergencies. Peer groups provide many functions that moderate the structural antagonism that sometimes seems to characterize the clinical encounter: they offer social support, serve as advocates and intermediaries, and evaluate information. Crucially they seek to build and sustain a 'sound moral order', recognising that an individual's wellbeing is shaped by their relationships with others (Janzen 1979, 318). Vernacularization then works best when it seeks to do more than merely appropriate and repurpose local linguistic terms, when it makes interventions resonate not with an unchanging tradition, but evolving contexts where indigenous ideas around wellbeing and healing have had to adapt to rapid shifts in social and economic relationships.

## 4.1 Intermediaries in Luo Reproductive Health

In the mid-to-late 1990s Susan Cotts Watkins and colleagues conducted research of exceptional depth among the Luo of western Kenya, seeking to understand the partial success of family

[2] Janzen traces the evolution of the therapy management group of a number of centuries in central Africa, but shows that by the nineteenth century spirits had become increasingly understood in terms of individual health, a process shaped by trade, slaving, and apparently rising infertility. Individualization then was not purely a colonial innovation.

planning interventions within that region. In a series of papers they explored how the western model of reproduction had been gradually domesticated as rural clinics started providing family planning services and Luo men and women told their friends and neighbours 'of their motivations and experiences, thus creating a local Luo model' (2000, 727). As Cotts Watkins and colleagues show, this "domestication" of a [relatively] small family strategy of reproduction was informed by clinical providers, but shaped by kin and peers. Nurses' technical knowledge was, generally, respected, and the potential advantages of fertility limitation were broadly acknowledged. Nonetheless, for very many Luo, the appropriateness of family planning for their contexts, or their bodies, remained in question. The risk that contraception might terminate rather than interrupt or delay women's reproductive lives was a common, serious concern; would a woman's marital relationship survive if she came off family planning and failed to become pregnant? A further cause of anxiety was the knowledge that contraceptive medications had been developed in the west, for western women; were contraceptives, therefore, more likely to cause side-effects among Luo (Kaler and Watkins 2001, 263; Rutenberg and Watkins 1997, 297)?

Given these concerns around family planning's external origins, and the social distance between providers and clients, it made sense that Luo asked their friends, kin and neighbours about their own contraceptive experiences. By talking with people who had lifestyles, family structures, and bodies like their own, Luo felt better able to evaluate the credibility of reproductive information, and to gauge how common, and acceptable, contraceptive use was among their peers. Such conversations were very common, with 75% of women interviewed reporting that they discussed family planning with a member of their social network, usually a friend. On average women talked to around four women about the topic. The theme was also ubiquitous among Luo men, even if they categorized their discussions as strategic analysis in contrast to female gossip. Such conversations had a substantial impact on subsequent reproductive behaviour, with Behrman, Kohler, and Cotts Watkins finding that a woman was

significantly more likely to use contraceptives if someone in her social network had previously used family planning (Behrman, Kohler, and Watkins 2002, 716-718, 721, 730, 734).

For medical providers it was common to view these peer-to-peer conversations in negative terms, as a process of vulgarization. From this perspective, rather than making biomedical knowledge relevant and comprehensible, non-expert discussion spread myths and rumours. As one nurse put it, "'We give them [female clients] good information, but then they go and talk with other women!'" Such attitudes prompted Rutenberg and Cotts Watkins (1997, 290-298) to ask 'Why would a woman instructed by a nurse at a workshop want to talk to the workshop cleaner as well?' A key part of the answer was that it was very common for a female informant to report that she preferred to talk about family planning with "'women like me'". As one explained, "'you know, if a stranger tries to convince women about family planning, they won't accept.'" Informants acknowledged that clinical information about the technical aspects of contraception was essential, but insufficient because of its universality. The initial decision to experiment with family planning, and subsequent decisions about whether to abandon it, or to change the type of contraception used, were typically made slowly and cautiously. The applicability of contraceptive information had to be judged and reviewed.

Rutenberg and Cotts Watkins' account fits with more recent observations of how clinical staff in western Kenya tend to present information in a didactic style, and often to view acceptance of, and adherence to, a biomedical understanding of reproductive health from an almost evangelistic perspective. At an antenatal clinic at the region's main referral hospital in 2019, two individuals gave health talks. One instructed attendees about danger signs during pregnancy; the other provided advice on the health benefits of handwashing, particularly with medicated soap. The contrast between the presentational styles of the two speakers was striking. The first, a trainee nurse-midwife, stood still in the middle of the large waiting area, reading with authority from a script, with his back to half the audience. The second speaker walked slowly around the space, illustrating her talk with a series of images, making her audience laugh, asking

questions, and using idioms in her responses. After the talk, when I complimented the second speaker on her effective presentation, she explained that she was a non-clinician, was employed by Proctor and Gamble's marketing department, and gave multiple health talks every day in the region's clinics.[3] Like Lifebuoy's marketing agents, nurse-midwives in western Kenya hope to convert individuals, but they use instruction rather than aspiration as they seek to effect a permanent shift in women's understanding and behaviours. That medical guidance is not always fully adhered to was referred to with irritation during interviews with nurse-midwives. For them, the process of information sharing should be teleological. For many of their clients, by contrast, information had to be tested, and engagement with biomedical knowledge was an ongoing process, potentially one shaped by reversal as well as diversion.[4]

Interviews with nurse-midwives indicated that, as a group, they felt a strong sense of their distinctiveness from lay populations. This was of course partly because of their gift of healing, and their daily encounters with death. But what was emphasized more was the self-discipline and personal sacrifice that had been required as trainees and practitioners. This strong sense of self-worth, of knowing what was in others' best interests, often came across in nurse-midwives' encounters with patients as arrogance.[5] Various women who had received maternity care reported that their lack of schooling seemed to make them unworthy of receiving explanation, that having a child as a teenager was discussed in terms of poor life choices, and that becoming pregnant over the age of thirty-five was an indicator of weak self-control.[6] Some interviews with medical staff indicated that a generational shift had occurred in how

[3] Fieldnotes 20 May 2019, Kisumu. The trainee was later given feedback by his tutors that he should try to engage his audience more effectively. But observation at other medical units in the region indicate that a didactic style of knowledge transmission is common. Fieldnotes July-August 2018 and 9 January 2019. It should be noted that the distinction between the two speakers' styles seems not to be gendered: male nurse-midwives were typically regarded by informants as being more approachable than their female counterparts.
[4] Int. CO, 23 May 2019; Int. JN, 15 May 2019.
[5] Int. MO, 24 May 2019; Int. RA, 21 Jan. 2019.
[6] For example Female Focus Group Discussion [FGD], 4 Aug. 2018, Ahero.

professionalism was understood among practitioners. For retired and nearly-retired staff, their job was intimately connected to their identity. From their perspective, younger colleagues and trainees often lacked a sense of vocation – they desired to have a job and status, but nursing and midwifery were a means more than an end. Older nurse-midwives acknowledged, and often were proud, of their prominence within their communities. Retired nurses are universally referred to as 'Sister' within the rural villages in which they live. Younger nurses, by contrast, feel that they are not treated with the same respect when they are outside the clinical setting, as their predecessors had been. Several referred, for example, to their travelling on public transport and hearing what they feel are pointed conversations about nurses' corruption and malpractice. Others complained that community members no longer respected their professional dignity and personal privacy, turning up at their homes in the evenings seeking medical attention. One interviewee was so keen to achieve anonymity outside the workplace that she moved house, no longer wore her uniform outside the hospital, dried her laundered workclothes indoors, and forbade her children from telling their friends that she was a nurse.[7]

Nurses-midwives' social distance from their communities then stems not only from the uniform they wear, and the (notionally) regular salary they receive. It is also actively fashioned. As such, clinical staff are poorly positioned to provide reproductive health information that is readily applicable within many local women's lives. By contrast, community-based distributors (CBDs) of family planning advice and materials were consciously appointed because of their embeddedness within their neighbourhoods. As Kaler and Cotts Watkins (2001, 245, 258-259) have shown, CBDs were regarded as particularly well-networked and unusually active in community groups. While they tended to be slightly better educated and more prosperous than average, they were still perceived by their peers to be the same kinds of people as themselves. As

[7] Int. MO, 24 May 2019; Fieldnotes, 14 Jan. 2019; Int. GA, 14 May 2019. Note that in fact community members seeking medical attention from off-duty nurses is not at all a new phenomenon, but older nurses viewed the practice as part of their service culture, and a mark of their esteem (albeit often irritating and exhausting).

remains the case today, with community health volunteers, CBDs in the 1990s were unpaid but hoped their roles would one day be salaried. In the meantime, they were motivated by an altruistic sense that their roles enabled their personal qualities to be effectively directed. They also enjoyed the status that came from their role as gatekeepers to medical institutions, and their structural proximity to local government.[8] But these are positions of strain as well as privilege. Like colonial chiefs, health volunteers straddle two worlds (Fallers 1955, 295). In the 1990s CBD programmes were 'aimed at reducing attitudinal, social and geographic barriers to the adoption of new methods of contraception'. But CBDs were intensely aware that many of their neighbours believed that contraceptives could not only cause severe immediate side-effects for users, but might lead to birth defects or sterility. CBDs then had to facilitate a family planning programme in a way which minimized risk to their good reputation within their communities. The solution, which Kaler and Cotts Watkins (2001, 263-267) observed, was to promote family planning only among women of proven fecundity. By prioritizing women with two or more children, who had not experienced long birth intervals involuntarily, CBDs bent 'the national guidelines to conform to community standards'. These intermediaries then not only illustrated how an external policy could fit local people's contexts, by reassuring women about congenital abnormalities and side effects, they also adapted family planning's supposed universalism, making it fit with local concerns around infecundity.[9]

Among the Luo then contraceptives were not used in the same way by women of all ages and parities, as Caldwell, Orubuloye, and Caldwell (1992) famously suggested would be the norm across Africa. Indeed, it seems likely that the precise ways in which societies across the continent selectively and partially engaged with contraceptive programmes would vary depending on a range of locally-specific factors, including the depth of anxiety around HIV, and the stability of

[8] Int. MO, 14 Jan. 2019; fieldnotes 9 Aug. 2018.
[9] It is possible that the adaptation of family planning models to fit Luo anxieties around primary and secondary sterility contributed to this society's fertility stall in the 1990s and 2000s.

marriage. It is probable, moreover, that contraceptive adoption would also vary depending on the relative significance of interlocutors such as CBDs. Not all societies would grant CBDs such a prominent place in knowledge transmission. In different times and places in East Africa, channels of information have been more diffuse, and greater effort has been made to use vernacular idioms to facilitate the absorption of biomedical concepts.

### 4.2 Family Planning and Group Learning in Kikuyuland

It is not uncommon to contrast the experience of the Luo of western Kenya with that of the Kikuyu, Kenya's largest ethnic group, from the central region to the north of Nairobi (For example, Gertzel 1970, 92-94; Cohen and Atieno Odhiambo 1992; Atieno-Odhiambo 2002).[10] The Kikuyu have dominated Kenya's postcolonial politics; they are the country's wealthiest, best-educated, most self-consciously "developed" people. By contrast the Luo have been politically marginalized since the 1960s, their relative economic significance has declined as Kisumu's role as East Africa's leading transport hub has been lost, and local poverty and institutional neglect have prevented the consolidation of early educational advances. Various neo-traditional cultural responses to the Luo's devastating AIDS epidemic, as described by Geissler and Prince (2010), have caused that ethnic group to be associated in Kenya's official mind with self-defeating backwardness.[11]

That the Kikuyu have recorded the country's lowest Total Fertility Rate could be explained simply as a direct consequence of their intense engagement with the formal economy, their high levels of education, and their benefiting from the densest, best equipped medical service in Kenya (Kenya National Bureau of Statistics, 2015, 66).[12] Yet individuals' reproductive

[10] In their own language Kikuyu people describe themselves as Gikuyu.
[11] The Luo's sense that AIDS had been caused by a weakening of traditional family ties and moral norms caused practices such as polygamy and widow inheritance to be maintained.
[12] Central Kenya, which is over 90% Kikuyu, had a Total Fertility Rate of 2.8 in 2014.

strategies are not mechanically determined by their contexts. The Kikuyu did, after all, enjoy a similarly privileged position in 1980, when they boasted the highest fertility rates in the world. People's worldviews have changed more than their situations. What needs to be explained is how the great majority of Kikuyu individuals or couples have interpreted and applied the concept of family planning. To understand this, it is necessary to appreciate the unusually active roles played by both Christian churches as cultural intermediaries between national and international family planning programmes and potential Kikuyu users, and community groups as key venues for the transmission and interpretation of knowledge.

That Christian clerics have frequently acted as cultural translators between the North and African societies has been widely acknowledged. Most scholarship, however, has focused on the initial process of missionization and the early colonial period, when a strategic tolerance of syncretic belief and practice facilitated conversion, and missionaries' embeddedness within indigenous societies facilitated local elites' negotiation of relatively favourable terms of imperial absorption (for example Waliggo 2013, 63-92; Prins 1980; Low and Pratt 1960, 25-159). Churches in contemporary Africa, however, can play similar roles. Africanization has meant that for several generations now, clergy have tended to belong to the communities to whom they preach. Meanwhile, the missions' use of "development", education and healthcare as agents of conversion has been sustained, meaning that the churches operate as mini-states, whose structures compel expertise in the workings and goals of governmental and non-governmental organizations. The churches though are not only responsive to external innovation; in some spheres, such as family planning, they shaped policy from the beginning, as well as using their cultural expertise to make family planning work within indigenous moral frameworks.

In several key ways, churches saw their role as making internal and external ideas around reproduction align. As one cleric explained, 'family planning is so popular among the Kikuyu because they have embraced education, they are hardworking, they have water, electricity, hospitals.' Kikuyu 'have been taught how to manage their families; today they can manage the

small families better'.[13] On one level this fits within an understanding of the adoption of contraception as a response to life (and death) being made relatively predictable, and a rational choice shaped by the logics of cause and effect, cost and benefit (Bledsoe 2002; Caldwell 1976). Yet teaching the Kikuyu 'how to manage' was not only the goal of external family planning programmes, but also of Kenya's nationalist leader and first president, Jomo Kenyatta. As Berman and Lonsdale (1998) have demonstrated, Kenyatta's political philosophy was dominated by his interpretation of Kikuyu values, and his determination to ensure that his fellow-Kikuyu fully embraced his gospel of self-mastery.[14] Yet Kenyatta was a pro-natalist, and the Kenyan government's promotion of fertility control was half-hearted before his death in 1978. As Kikuyu informants born in the 1960s remembered, 'our fathers viewed us children as a resource.' The shift away from fertility maximization was partly a product of falling child mortality ('over time people realized children would survive'), but it was a societal shift in thinking about pressure on resources that was key. Key agents in this recalibration were the Christian churches, and particularly the Presbyterian church (PCEA) which developed one of Africa's earliest successful family planning programmes around Chogoria, neighbouring Kikuyuland, in the 1960s. As the PCEA began to promote family planning within Kikuyuland, they melded Kenyattan philosophy with a revised interpretation of biblical injunctions. The command in Genesis 1:28 to 'Be fruitful and multiply; fill the earth' fitted well with Kenyatta's representation of the Kikuyu 'theology of abundance'. But by the 1980s, as Kikuyuland came to feel full, a new generation of local intermediaries charged their followers with adapting to a different scale. The PCEA began to preach that 'You are told to fill the world; now, your world is your two acres. If you have two kids, your world is almost full.' 'If you have two acres, don't have more children than that land can support, than you can educate, than you can establish.' 'There is that sense of

[13] Int. IENK, 26 Mar. 2015.

[14] Informants not infrequently discussed fertility control as requiring 'management', and indicated that women are better managers than men. See for example FGD Nyeri town, 24 Mar. 2018.

self-reliance, not being dependent on others . . . If you have too many kids, people will look at you as if . . . you don't know what you are doing.'[15] As one participant in a focus group put it: 'We are told by grandparents it is ideal to have twenty children, fifteen of them girls. So you would get rich through brideprice. But if you did that now you would be lost, bankrupt.'[16]

This thinking of reproduction in terms of wealth or bankruptcy fits comfortably with other Kenyans' typecasting of the Kikuyu as exceptionally materialistic. This stereotype of the Kikuyu as a society where individuals' prioritized their own self-interest was in some ways supported by informants' discussion of family and reproduction. As one interviewee put it, 'when you get a child, it is your responsibility, the parent – not the village, not the community, not the extended family. Now . . . people are individualistic; in the past all ate from one pot, at the grandmother's, at an aunt's – no longer.' Similarly, a focus group agreed that while in the past children were born to and sustained by a lineage, now people have to think about their individual capacity to manage their own nuclear family. 'You have a financial obligation to parents, children, siblings, not to cousins. You can help the latter, but it is not a must. Some cousins, uncles are just acquaintances.'[17] Yet the Kikuyu compensate for this narrowing of kinship ties by means of an associational life of unusual richness, particularly for women. Indeed, comparing interviews with Kikuyu and Luo women, it is the latter who came across as more atomized. Like their Luo counterparts Kikuyu women tend to belong to a church group. But they are also typically members of multiple savings and loans groups, one at work, one of former classmates, one residential. One interviewee explained that her mother had inherited membership of her grandmother's residential group, and actively participated in it even though she was not in fact resident in the grandmother's village. This was because the significant reserves that long-established groups have accumulated over the years make it possible for very large loans to be

[15] Int. AO, 18 Mar. 2015; Int. MK, 18 Mar. 2015; Int. DWM, 24 Mar. 2015. See also Berman and Lonsdale 1998, 18.
[16] FGD Nyeri town, 24 Mar. 2018.
[17] Int. DWM, 24 Mar. 2015; FGD Nyeri town, 24 Mar. 2018.

granted. Therefore, when women become too elderly to contribute and participate fully, they seek to pass on their valuable membership to one of their daughters.[18]

Generally these women's groups are made up of members' peers. However, members of residential groups are not necessarily age-mates, nor equals in terms of education, job category, or income, though all are neighbours. Kikuyu informants, like the Luo interviewed by Cotts Watkins in the 1990s, seek information from "women like them". But unlike the Luo they also appreciate that groups provide women with a range of experiences, which cut across barriers of class, residence, and age. While the groups' primary functions are associational and a means of facilitating female economic autonomy, they also provide a venue where women share information around wellbeing, medication, and family planning. Thus one informant explained that she discussed contraceptive options within her various groups, following the birth of her last child. In the end she followed one of her peers' recommendation, to use a contraceptive implant on the grounds that it had few side effects, was invisible, and was good for long term contraception yet could be removed at any point. The groups in other words meant this informant could find not just a woman like herself in general terms, but one with a similar kind of relationship, comparable work patterns, and shared ideas around family size and birth intervals. 'It's like women's groups share "best practice", or even "best experience" to do with healthcare. Where a doctor recommends something but you don't fully understand, or you're not convinced, your friends provide alternative knowledge.'[19]

The density of social groups among the Kikuyu might be assumed to be an organic by-product of the high levels of education and commercial engagement which characterize central Kenya. This though would be only a partial truth. That Kikuyuland's associational life is so rich is to a large degree a consequence of its late colonial history. The Mau Mau revolt of the 1950s defined the Kikuyu in the colonial mind as a society ill at ease with modernity. Rather than

[18] Int. CMN, 11 Dec. 2017. See also Mweiga Church FGD, 25 Mar. 2018.
[19] Int. DWM, 24 Mar. 2015; Int. CMN, 11 Dec. 2017; Mweiga market FGD, 26 Mar. 2018.

engage with activists' demands for the return of lands lost to white settlers, and an end to political subjugation, the initial imperial response was to define Mau Mau as a 'yell from the swamp'. The revolt had to be utterly defeated, and male Kikuyu who were not self-avowed loyalists were fed into a programme of re-education of remarkable scale and ambition (Anderson 2005; Elkins 2005). Meanwhile, repelled by what they regarded as Mau Mau's neo-traditional savagery, British officials took the decision to accelerate Kikuyuland's "modernization". Convinced that migration between village and town, and the contradictory impulses of the communal and the individual, had provoked endemic mental instability, British officials sought to rationalize Kikuyu society. In order to re-focus Kikuyu's energies onto commercial production for the benefit of the family rather than the lineage, Kikuyuland's property boundaries and settlements were torn down. Land was re-allocated, with priority shown to loyalists, in standardized blocks of, notionally, ten acres per family. Homes were relocated from farmland into residential clusters, easily policed and serviced. Kikuyuland's social mosaic was disciplined into a geography of gridlines and hubs (Berman and Lonsdale 1992, 459; Ogot and Ochieng' 1995, 49).

With most of Kikuyuland's menfolk in detention or fighting the war, women were identified as key to the reorganization of Kikuyu society (Presley 1988). The colonial state enlisted the support of Christian missions in pressuring women into a new kind of associational life. This was partly stimulated by the drain on governmental resources required by the long-running Mau Mau conflict, but it also reflected the missions' long experience in seeking to transform indigenous norms.[20] By the early 1960s women across Kikuyuland were being pressed

[20] Not all women's groups were church-led, nor focused only on the region affected by Mau Mau. *Maendeleo ya Wanawake* (Female Progress), for example, was set up in 1952 by the Department of Community Development and Rehabilitation, though its founder was from a missionary family, and churchwomen were prominent patrons. Its first branches were organised by white female Community Development Officers, employed directly by the central government. After independence MYWO remained close to government until the 1990s. It currently claims a membership of four million.

by state-sponsored but church-run groups to learn new ways to look after their children's health, appreciate the benefits of institutional childbirth, and guide the new generation into a world less dominated by kinship obligation and more oriented towards market production. Non-compliance meant the loss of welfare provision and compulsory labour (Manji and O'Coill 2002, 570-571).[21] This process of state-sponsored association-building was temporarily interrupted with decolonization, but then revived as Kenya's post-colonial government developed an ideology of *harambee*, or pulling together for community building. While they were, notionally at least, voluntaristic, and were not confined to women only, *harambee* community groups were particularly numerous and active among the Kikuyu, where public donation to good causes provided a necessary step towards political self-advancement (Aubrey 1997: 47-53; Widner 1993: 34, 96). A final factor which has ensured that women's groups are especially common in Kikuyuland is the weakening of marriage. While this phenomenon is not unique to the Kikuyu, marital breakdown and reproduction outside of marriage are particularly frequent there (Kenya National Bureau of Statistics. 2015, 59, 76). For women, associations of their peers provide much of the emotional and financial support formerly associated with the extended family.[22] It is this distinctive history then which explains why women's groups in Kikuyuland are relatively significant in the transmission of usable knowledge around family planning. It is not only that groups are ubiquitous because of their active promotion in the past; it is also that they have been consistently utilized as agencies of transformation.

4.3 From the vertical to the horizontal: state engineering of peer learning in Buganda

[21] Kereri to Kingston, 9 Feb. 1956, Tumutumu Presbytery Archive, Homecraft Course CCK Tetu; The report of the committee appointed by council to study the work of Maendeleo ya Wanawake, 10 Aug. 1962, Tumutumu Presbytery Archive, Nyeri NDC Works Committee. The Anglican Mother's Union was established in Kenya in 1918; the Church of Scotland Women's Guild began operations two years later. They enjoyed limited support before the 1950s due to their opposition to female initiation rites which involved genital cutting.
[22] Int. SM, 30 Mar. 2015; Int. Mweiga market FGD, 26 Mar. 2018; CMN, 11 Dec. 2017.

The focus of the chapter will now shift from Kenya to Uganda, partly to highlight that sub-national variations in health patterns are common across the continent, and partly because Uganda's data are some of the richest from colonial Africa. Uganda was exceptionally intensely missionized, enjoyed an unparalleled density of medical provision for British colonial Africa, and was home to East Africa's only university and research hospital. The wealth of sources which resulted highlight the complex, often unexpected, relationships that developed between education of various kinds and health outcomes.

One way to illustrate this point is to compare mortality rates from colonial Uganda's prosperous, highly-educated, "developed" core, the kingdom of Buganda, home to the Protectorate's capital, Entebbe, and largest city, Kampala, with the kingdom of Ankole, a peripheral region designated as a reservoir of unskilled labour by the colonial state. At the end of the colonial period the literacy rate among women of child-bearing age was twelve times higher in Buganda than it was in Ankole. Average income in Buganda, moreover, was more than five times greater, while Buganda's annual medical attendances per capita were 79% higher than in Ankole. Buganda's advantages were if anything even greater earlier in the colonial period. Given these marked differentials in human capital, wealth and healthcare provision, it is surprising that Ankole's Crude Death Rates per 1000 mimicked those of her wealthier neighbour in the 1930s, that Uganda's first 'proper' census in 1948 reported that Buganda's Infant Mortality Rate was higher than Ankole's, and that the 1969 census found lower rates of child mortality in Ankole than Buganda ""(Doyle 2013: 275-296).[23]"",

In some years Buganda's mortality levels were lower than Ankole's but the broad similarity in the two kingdoms' demographic rates can be viewed as the result of Ankole's

[23] In general these data should be viewed with caution. Vital registration in colonial Uganda was known to be problematic, with Crude Death Rates particularly severely affected by under-recording and migration. Nonetheless the general pattern is striking.

overperformance, and Buganda's underperformance. Buganda's medical advantages by the early 1950s were striking, with fifteen hospitals compared to Ankole's one, and a doctor:patient ratio that was seven times higher than Ankole's (Uganda Protectorate 1952; Uganda Protectorate 1955). Yet Uganda's health strategy in the 1930s had shifted its focus towards preventive medicine, which tended to even out the Protectorate's health disparities. Relatively little effort was devoted initially to achieving behavioural or attitudinal change, but interventions which were coercive and infrastructural, such as mass inoculation and water protection programmes, could have a major impact on infant and child mortality. Meanwhile, Buganda's medical system, while impressive, had its limitations. Colonial medicine had little impact on the incidence and treatment of malaria in rural communities before the mid-1950s, so that Ganda children, living in a wetter, swampier environment, suffered much greater malarial morbidity than did their Nkole peers.[24]

Moreover, a comparison of Ankole and Buganda suggests that in some regions and some periods, nutritional status could rival human capital in terms of its impact on morbidity and mortality. Although cash poor, Ankole was much richer in livestock than its neighbours, and, just as significantly, by the mid-colonial period livestock were distributed much more equitably within Ankole than Buganda. Nkole had a diet that was richer in animal protein than wealthier Ganda (Doyle 2013, 214-215). Female education in Buganda, moreover, appears to have often had initially negative consequences in terms of diet-related disease. In the 1950s Ganda children suffered extremely high levels of protein-energy malnutrition and gastroenteritis, and steadily increasing problems of marasmus. These medical conditions were associated with the increased popularity of bottle feeding and the evolving practice of fostering within the family. Kampala's child welfare clinic records showed that the incidence of diarrhoea and vomiting doubled from 9% to 18% between 1950 and 1955 (Welbourn 1957). Uganda's leading paediatrician, Dick

[24] R.S.F. Hennessey, Personal Reminiscences, RH/ODRP/MSS.Afr.S.1872 Box XVIII; Doyle 2013, 297-302.

Jelliffe (1962), bemoaned '[t]he recent trend toward unnecessary bottle feeding by semi-sophisticated Baganda [Ganda], especially in towns and to some extent in rural areas', reflecting a fixation with the 'semi-educated', 'transitional', 'aspirational' which dominated many aspects of late colonial rhetoric across East Africa. It was women with several years' schooling who supposedly fell prey to advertising which misled them into thinking that through bottlefeeding they would be able to imitate what Jelliffe described as their 'financial and educational "superiors"'. According to Jelliffe, 'Marasmus results in most cases from the baby being given extremely dilute milk key as a result of poverty and lack of knowledge of the infants' needs and the correct method of making up feedings. It is almost always associated with infective diarrhoea and thrush, resulting from the contaminated bottle.' Diarrhoea of early childhood had been a 'relatively unimportant' disease in the children's ward of Kampala's state hospital in 1951. By 1959 it was the leading cause of admission. Ironically investigations found that in fact highly-educated Ganda women tended to breastfeed exclusively for six months, following the guidance provided by English-language childcare manuals. The good health that their babies enjoyed was not the result of educated mothers' capacity to follow instructions on safe bottle-feeding. Whether in fact poorer women with limited education were misled into aspiring towards a false ideal is open to question. Significant inequalities within late colonial Buganda certainly existed, but social distance between elite and non-elite women was not carefully guarded. Pressure to resume work in urban contexts that were not conducive to sustained breastfeeding seems equally likely to have encouraged bottle-feeding among the poor (Uganda Government 1958, 6-11; Bennett and Stanfield 1972, 4).

The perceived epidemic of protein-energy malnutrition in 1950s Buganda was understood in similar ways. Kwashiorkor was attributed by medical specialists to the trauma experienced by young Ganda children who were separated from their mothers. Western doctors and psychologists believed that in the past Ganda had systematically fostered out young children to relatives because of cultural beliefs in the importance of cementing kinship ties, and the

dangers of breastfeeding while pregnant. By the 1950s it was thought that the frequency of fostering had increased because of three factors. Parents with limited education sent their children to stay with relatives who lived near good primary schools. Urban mothers with sufficient education to secure a job in the modern sector often lacked the resources to pay for childcare in the city. And wives with some schooling were held to be particularly likely to be divorced, and marital breakdown commonly led to children being fostered by paternal kin (Jelliffe 1962, 415).[25] Again, highly educated Ganda were regarded as being immune to problems of tradition or transition. Such parents 'want to hear and see their children and to take and an interest in their activities', to monitor their education, and to avoid their children's development being held back as a consequence of being fostered by uneducated, elderly relatives (Makumbi 1953, 10-14).

It is likely that these medical narratives exaggerated the particular risks associated with limited education, very long established in British imperial culture, and underestimated the extent to which elite education was associated with extremely sharp differentials in terms of income, housing and sanitation, which would also have contributed to their children's superior health. But the narratives did move beyond condemnation, and so have a larger significance. Through the 1950s, and with much greater success in the 1960s, medical policy in Buganda addressed the perceived negative association between (limited) education and child health in two interrelated ways. It sought to counter health-related misunderstandings by vernacularizing mothercraft, a programme originating in Britain's settler colonies which aimed to reform childrearing, using domestic science to generate industrious, loyal, progressive subjects of empire; and it endeavoured to enlist educated women in medical outreach.

At the heart of the programme of vernacularization which evolved was an awareness that later colonial Uganda was remarkable for the number of social organizations which were to be

[25] Hebe Welbourn, 'Childhood in a changing world' (unpublished TS, n/d, Hebe Welbourn papers), Chapter 9, p. 1.

found in rural and urban communities, particularly in wealthier regions such as Buganda. By far the largest proportion of these institutions were focused on women's issues, and very many included mothercraft, hygiene, and nutrition within their remit. Many of these institutions originated in the early decades of the twentieth century, a time when the colonial state, missions, and indigenous elites feared that the Ganda faced catastrophic population decline due to sub-fertility arising from sexually-transmitted infections. Others developed after the Second World War, as the colonial government sought to stabilize African societies thought to be ill-equipped to adapt easily to rapid modernization (Kyomuhendo and McIntosh 2006, 56, 93-97). Such organizations were reported to be led, typically, by educated, older women. They were often cross-class, and sometimes cut across ethnic boundaries.[26] The existence of this vibrant civil society was initially understood by public health workers as a means of bringing women together for efficient professional dissemination of knowledge. Hebe Welbourn, the pioneer of local child welfare in Buganda, established portable clinics which were planned to coincide with local meetings of women's clubs (Welbourn 1956). Over time, these clubs, and the elite women who typically led them, became the avenues through which mothercraft ideas were transmitted. They permitted formally educated elder women to share their learning and experience beyond the domestic sphere, seeking to inculcate a vernacularized modernity within an increasingly health-oriented civil society.

The success of such interactions in a number of villages around Buganda convinced Hebe Welbourn of the value of the concept, so that conversations between women of greater and lesser education became a trope of medical dissemination through vernacular newspapers, popular music and other forms of media. In one typical example of this genre, a Luganda radio programme in 1962 featured two mothers acting out a conversation about the poor health of one of their children. Mrs Kapere (whose name signifies her marginal education and status) told her

[26] CMS Historical Record 1947-8, pp. 54-5, Adam Matthew Online (AMO); CMS Historical Record 1951-2, pp. 126-7, AMO.

better-educated neighbour that her baby did not breast-feed well, so she bought some imported dried milk. She could not understand the instructions which were given in English and it emerged that she was not using enough of the dried milk to keep her baby healthy. Her mentor told her that she would need to use five times as much dried milk, which she feared would be unaffordable, given Mr Kapere's unfortunate drinking and work habits. Mrs Kapere accepted her friend's advice that "It would be cheaper to breast-feed as much as possible and to give feeds of [fresh] milk and porridge from a cup", and also to go to a child welfare clinic and to buy a book in Luganda on child-rearing. In case anyone had failed to absorb the subtleties of the message, both women chorused at the end of the programme: 'breast milk is like medicine to prevent baby from becoming ill'.[27]

It is the transition from this generalized use of women's groups to improve child health to the dedicated employment of social associations to facilitate a transformation in dietary practice that makes Buganda a particularly revealing case study of the processes of vernacularization. One of the best-evidenced examples of health improvements shaped by peer-to-peer information sharing anywhere in Africa is the *Mwanamugimu* programme in 1960s Buganda. Between the 1940s and the early 1970s, Uganda became a global centre of nutritional research. During the 1950s understanding of Kwashiorkor's complexity expanded significantly as nutritional specialists were recruited and a cohort of highly-able indigenous and expatriate clinicians collaborated with equally eminent anthropologists and psychologists based at Makerere's East African Institute of Social Research. By the early 1960s, Uganda was internationally renowned for its contribution to knowledge of the social and physiological causes of malnutrition (Doyle 2016).[28] Yet kwashiorkor's mortality rates had barely changed, with the

[27] 'Children's Doctor' (transcript of a monthly radio programme, c.1962, H. Welbourn personal papers)

[28] *Mwanamugimu* means 'healthy child'. Note that medical understanding of the aetiology of kwashiorkor, and its categorization as a distinct condition, separate from other nutritional disorders, is different today than in the mid-twentieth century.

failure of the treatment programme which had been developed evidenced by the frequency with which mothers returned to Mulago with children who had previously been discharged (Brown 1965).

By the late 1960s the clinical picture had been transformed, with malnutrition-related mortality rates falling rapidly, due to a shift from highly-technical hospital-based treatment to a programme of knowledge-sharing based around peer-to-peer learning. In Jennifer Tappan's (2017, 69-70) rich study of Uganda's Mwanamugimu programme, she emphasized western biomedicine's capacity for self-reflection and self-criticism in the era of decolonization. Doctors in Uganda had long assumed that hospital admission not only permitted intensive treatment but also sustained health education. However, by the early 1960s specialists such as Paget Stanfield (1976, 134-135) came to the conclusion that, for mothers, the experience of admission of their child as an inpatient in fact obstructed change in feeding practices. The hospital environment positioned mothers as passive recipients of external knowledge, and conveyed the message that the cure for kwashiorkor was highly technical and something that experts performed on their children. In 1965 a radical new approach was adopted with the opening of the *Mwanamugimu* clinic at Mulago. This clinic promoted one simple dietary change which would both treat and prevent kwashiorkor: the feeding of young children with a mashed mixture of locally-available carbohydrate and (usually vegetable) protein foodstuffs, known as *kitobero*. The constituent parts had to be measured approximately (by the handful), and cooked together. Not only was feeding deliberately demedicalized, so too was the context in which children were treated and their mothers taught. The new clinic was constructed to resemble a typical rural domestic setting, many of its personnel were consciously non-clinical in their backgrounds, and clinicians could only enter if they removed their white coats and stethoscopes. As Hallweg and McDowell (1979, 71) have emphasized, all staff, from doctors to sweepers, were required to participate in the teaching. Tappan (2017, 70-81) defines *Mwanamugimu* as a hybrid public health intervention. The simple dietary reform drew on highly sophisticated clinical research and was conceived by a team

of medical doctors. But these doctors became convinced that mass behavioural change could only occur if they worked with rather than against indigenous concepts of dietary wellbeing. Furthermore, they recognized that indigenous Ganda women were best placed to work out how to transmit nutritional information in a comprehensible and achievable way. The leading figure in this hybridization of knowledge was Gladys Nansubuga Stokes, the unit's first director, a Ganda woman appointed because of her long experience of teaching home economics, including mothercraft and nutrition, at Uganda's oldest girl's school. For Dr Stanfield (1976, 134), *Mwanamugimu*'s success relied on 'local people who can live in two cultural frameworks . . . interpreters of the message' who could translate nutritional science into culturally-appropriate domestic practice.

*Mwanamugimu*, crucially, quickly made peer learning a core part of the nutrition rehabilitation programme. Abandoning didactic techniques of information provision through lectures and posters, inpatients who had learned how to make *kitobero* and whose babies were almost ready for discharge were enlisted as demonstrators, simultaneously teaching the technique and providing evidence of its success to new inpatients and outpatients alike. Such peer education worked well within the confines of the hospital, perhaps because of the added authority provided by the (albeit demedicalized) clinical environment. It was found, however, that mothers of recovering children struggled to alter feeding practices in their communities on their return. Accordingly, *Mwanamugimu*'s outreach programme sought to enlist women who were already leaders within their rural communities to preach the virtues of *kitobero*. Schoolteachers, group chairwomen, wives of clergy and other established 'influencers' created local *Mwanamugimu* clubs. As Tappan (2017, 87, 96-108) highlights, the adoption of *kitobero* became almost universal in the areas where the programme was active, rapidly reducing the incidence of malnutrition, and becoming embedded practice, transmitted from generation to generation, and reaching beyond the membership of the *Mwanamugimu* clubs. Over time leaders began promoting not only enhanced diets, but also the construction of protected springs and pit latrines suitable for small

children, addressing the role played by episodes of infectious disease in the onset of nutritional crisis (Jelliffe 1963, 121-3; Nott 2016). Crucially, the concept of *kitobero* was not confined solely to *Mwanamugimu* clubs, but was transmitted also through more generalist women's clubs, set up by organizations such as the YWCA, The Uganda Council of Women, and the Mothers' Union. Uganda's Ministry of Culture and Community Development was particularly concerned with improving the understanding of nutrition, especially amongst uneducated mothers. By the early 1970s the Ministry alone had trained 300 club leaders and supported 4,000 clubs, each with 25-30 members (Hoorweg and McDowell 1979, 30-31).

## 4.4 Conclusion

The success of vernacularization among the Kikuyu, and especially the Ganda, compared to the Luo can be interpreted in various ways. It might be argued that malnutrition is a medical condition shaped by a relatively narrow range of cultural and social factors. Family planning in East Africa, by contrast, is affected by historic infertility, significant changes in marriage, sharpening intergenerational tensions, and a broad cultural discomfort with public discussion of both sex and family size. Compared to navigating these overlapping obstacles, reconfiguring ideas around diet was relatively straightforward, even in Buganda where convincing people that the emblematic plantain was not a superfood met with strong cultural resistance. The linguistic challenge of conveying biomedical concepts like a mixed diet and mother and child health was comparatively straightforward. The Luganda word *kitobero* was readily available, conveying the meaning of both mixture and a feast. The *Mwanamugimu* clinic again derived from a well-known Ganda proverb, meaning a healthy child comes from a healthy mother (Stanfield 1976, 134). By contrast indigenous terms for contraception and family planning have proven difficult to come by. In the 1990s, women speaking Dholuo would use the English word 'family' to discuss their contraceptive experiences (Rutenberg and Watkins 1997, 296). Only relatively recently have

some Kikuyu started using vernacular terms such as *kwifanga* (getting organized/sorting yourself out) or *kumenyerera uciari* (being careful about giving birth). Even if a literal translation of contraception existed, it is likely that it would be avoided as for many Kenyans that concept, unlike family planning, is culturally inappropriate.[29]

Moving beyond this basic observation that the degree of, and scope for, cultural translation required depends on the nature of the medical condition under consideration, it might simply be observed that vernacularization was an easier task in Buganda and Kikuyuland because of the exceptional density of these societies' associational lives. Again, there is a fundamental logic here, but the richness of Ganda and Kikuyu civil society is not an historical accident. In both areas the colonial state and Christian missions combined to pressure women into groups that were envisaged as media of social transformation, in Kikuyuland because of Mau Mau, in Buganda because of a perceived crisis of sub-fertility attributed to sexually-transmitted infections (Doyle 2013, 313-314). The Luo in fact possessed the largest number of women's groups within Kenya by the 1950s, but their early advantage was not sustained, due to political and economic marginalization. Moreover, Luo social groups did not possess the tradition of purposive intervention that characterized those of Buganda and Kikuyuland from the beginning. The character and ubiquity of social groups then varied markedly from region to region.[30]

The success of vernacularization, these case studies would indicate, depends not on how organically the process developed, but rather how carefully key actors sought to meld biomedical and indigenous conceptual understandings. The peer learning model is not absolutely separate

[29] Int. CM, 24 July 2019. See Robins 2009, 97 for discussion of how self-styled cultural intermediaries in South Africa alienate their audiences with 'sex talk'. Vernacularization does not simply mean that terms need to be translated – it requires the cultural sensitivity to recognize that some words should not be used in public discourse.

[30] The report of the committee appointed by council to study the work of Maendeleo ya Wanawake, 10 Aug. 1962, Tumutumu Presbytery Archive, Nyeri NDC Works Committee; Int. MO,

from the formal structures of the biomedical system. Indeed governmental and non-governmental agencies recognized the efficacy of the role model as peer educator. The transmission of biomedical knowledge is no doubt most effective in families where lessons learnt at school were reinforced at home by formally-educated parents.[31] But agencies have, to some degree, recognized the advantages of encouraging the formally-educated to share their learning and experience beyond the domestic sphere, seeking to inculcate a vernacularized modernity within a health-oriented civil society. As the example of the Luo demonstrates, however, vernacularizing the message does not necessarily involve a direct translation. Luo advocates of family planning adapted programme goals to fit their sense of what would be acceptable among their peers, and wider society.

A related, final point is that vernacularization is shaped by power dynamics. This was true too of precolonial therapy management groups, which used social healing to integrate, but also discipline, the wealthy and the marginalized (Janzen 1979, 323; Peterson, 2010, 1562). Modern-day peer groups still empower the mediators, but their integrative role is less clear. For sure, Kikuyu residential groups, and some Ganda women's groups were explicitly cross-class in nature. But the extent to which immigrants or non-Christians were served by associations often organized around pre-existing social ties, or through churches, is a question worthy of further research.

**Works Cited**

Anderson, D. (2005). *Histories of the Hanged: Britain's Dirty War in Kenya and the End of Empire.* London: Norton.

[31] Upbringing essays, Audrey Richards papers, LSE archive, RICHARDS/6/24 X.

Atieno-Odhiambo, E. (2002). 'Hegemonic Enterprises and Instrumentalities of Survival: Ethnicity and Democracy in Kenya', *African Studies*, 61/2:223-249.

Aubrey, L. (1997). *The Politics of Development Cooperation: NGOs, Gender and Partnership in Kenya.* London: Routledge.

Behrman, J, H.-P. Kohler, and S. Cotts Watkins. (2002). 'Social Networks and Changes in Contraceptive Use over Time: Evidence from a Longitudinal Study in Rural Kenya', *Demography,* 39/4:713-738.

Bennett, F., and J. Paget Stanfield. (1972). 'The Clinical Conditions and Aetiology of Malnutrition in Uganda' in V. Amann, D.G.R. Belsha and J. Paget Stanfeld (eds.) *Nutrition and Food in an African Economy*. Kampala: Department of Rural Economy. Pp. 4-10.

Berman, B., and J. Lonsdale. (1992). *Unhappy Valley: Conflict in Kenya and Africa*, vol. 2. London: James Currey.

Berman, B., and J. Lonsdale. (1998). 'The Labors of "Muigwithania": Jomo Kenyatta as Author, 1928-45', *Research in African Literatures,* 29/1:16-42.

Bledsoe, C. (2002). *Contingent Lives: Fertility, Time and Aging in West Africa.* Chicago: Chicago University Press.

Brown, R.E.. (1965). 'Paediatric post-mortem survey in Uganda', *Tropical and Geographical Medicine,* 17:289-300.

Caldwell, J. (1976). 'Toward a Restatement of Demographic Transition Theory', *Population and Development Review*, 2/3-4:321-366.

Caldwell, J. (1979). 'Education as a Factor in Mortality Decline: An Examination of Nigerian Data', *Population Studies,* 33/3:395-413.

Caldwell, J., I. Orubuloye, and P. Caldwell. (1992). 'Fertility Decline in Africa: A New Type of Transition?', *Population and Development Review,* 18/2):211-242.

Cleland, J., and J. van Ginneken. (1988). 'Maternal Education and Child Survival in Developing Countries: The Search for Pathways of Influence', *Social Science & Medicine,* 27/12:1357-1368.

Cohen, D., and E. Atieno Odhiambo. (1992). *Burying SM: The Politics of Knowledge and the Sociology of Power in Africa*. Portsmouth, New Hampshire: Heinemann.

Desai, S., and S. Alva. 1998. 'Maternal Education and Child Health: Is There a Strong Causal Relationship?', *Demography,* 35/1:71-81.

Doyle, S. (2013). *Before HIV: Sexuality, Fertility and Mortality in East Africa, 1900-1980*. Oxford: Oxford University Press.

Doyle, S. (2016). 'Social Disease and Social Science: The Intellectual Influence of Non-Medical Research on Policy and Practice in the Colonial Medical Service in Tanganyika and Uganda' in A. Greenwood (ed.) *Beyond the State: The Colonial Medical Service in British Africa*. Manchester: Manchester University Press. Pp. 126-152

Elkins, C. (2005). *Imperial Reckoning: The Untold Story of Britain's Gulag in Kenya*. New York: Henry Holt and Company.

Fallers, L. (1955). 'The Predicament of the Modern African Chief: An Instance from Uganda', *American Ethnologist,* 57/2:290-305

Geissler, W. and R. Prince. (2010). *The Land is Dying: Contingency, Creativity and Conflict in Western Kenya.* London: Berghahn Books.

Gertzel, C. (1970). *The Politics of Independent Kenya, 1963–8*. Nairobi: East African Publishing House.

Hobcraft, J. (1993). 'Women's Education, Child Welfare and Child Survival: A Review of the Evidence', *Health Transition Review*, 3/2:159-175.

Hoorweg, J., and I. McDowell. (1979). *Evaluation of Nutrition Education in Africa: Community Research in Uganda, 1971-1972*. The Hague: Mouton Publishers.

Iliffe, J. (1995). *Africans: The History of a Continent*. Cambridge: Cambridge University Press.

Iliffe, J. (2006). *The African AIDS Epidemic: A History*. London: James Currey.

Janzen, J. (1978). *The Quest for Therapy in Lower Zaire*. Berkeley: University of California Press.

Janzen, J. (1979). 'Ideologies and Institutions in the Precolonial History of Equatorial African Therapeutic Systems', *Social Science & Medicine. Part B: Medical Anthropology,* 13/4:317-326.

Jeffery, P. and R. Jeffery (1998). 'Silver Bullet or Passing Fancy? Girls' Education and Population Policy' in C. Jackson and R. Pearson (eds.) *Feminist Visions of Development: Gender Analysis and Policy*. London: Routledge. Pp. 235-254.

Jelliffe, D. (1962). 'Village Level Feeding of Young Children in Developing Tropical Regions, with Especial Reference to Buganda', *Journal of the American Medical Women's Association*, 17/5:409-418.

Jelliffe, D. (1963). 'Custom and Child Health I', *Tropical and Geographical Medicine,* 15:121-123.

Johnson-Hanks, J. (2006). *Uncertain Honor: Modern Motherhood in an African Crisis*. Chicago: University of Chicago Press.

Kaler, A., and S. Cotts Watkins. (2001). 'Disobedient Distributors: Street- Level Bureaucrats and Would- Be Patrons in Community- Based Family Planning Programs in Rural Kenya', *Studies in Family Planning,* 32/3:254-269.

Kenya National Bureau of Statistics. (2015). *Kenya Demographic and Health Survey 2014*. https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf

Kodesh, N. (2010). *Beyond the Royal Gaze: Clanship and Public Healing in Buganda*. Charlottesville: University of Virginia Press.

Kyomuhendo, G. B., and M. McIintosh. (2006). Women, Work *and Domestic Virtue in Uganda 1900-2003*. London: James Currey.

Low, D.A., and C. Pratt. (1960). *Buganda and British Overrule, 1900-1955: Two Studies*. Oxford: Oxford University Press.

Makumbi, Mr and Mrs. (1953). 'Home life' in H. Welbourn (ed.) *The Coronation Book of Child Life and Health in Buganda*. Kampala. Pp.10-14.

Manji, F., and C. O'Coill. (2002). 'The Missionary Position: NGOs and Development in Africa', *International Affairs,* 78/3:567-584.

Nott, J. (2016). 'Malnutrition in a modernising economy: The changing aetiology and epidemiology of malnutrition in an African Kingdom, Buganda c. 1940–73', *Medical History,* 60/2:229-249.

Presley, C.A. (1988). 'The Mau Mau Rebellion, Kikuyu Women, and Social Change', *Canadian Journal of African Studies*, 22/3:502-527.

Ogot, B. and W. Ochieng'. (1995). *Decolonization and Independence in Kenya, 1940-93*. London: James Currey.

Peterson, D. (2010). 'Review of N. Kodesh, Beyond the Royal Gaze', *American Historical Review,* 115/5):1561-1562.

Preston, S. (1985). 'Resources, Knowledge and Child Mortality: A Comparison of the U.S. in the Late Nineteenth Century and Developing Countries Today' in IUSSP (ed.) *International Population Conference, Florence, 1985,* vol. 4. Liege: IUSSP. Pp. 373-386.

Prins, G. (1980). *The Hidden Hippopotamus: Reappraisal in African History, The Early Colonial Experience in Western Zambia*. Cambridge: Cambridge University Press.

Robins, S. (2009). 'Foot Soldiers of Global Health: Teaching and Preaching AIDS Science and Modern Medicine on the Frontline', *Medical Anthropology,* 28/1:81-107.

Rutenberg, N., and S. Cotts Watkins. (1997). 'The Buzz Outside the Clinics: Conversations and Contraception in Nyanza Province, Kenya', *Studies in Family Planning*, 28/4:290-307.

Stanfield, J. P. (1976). 'Nutrition Education in the Context of Early Childhood Malnutrition in Low-resource Communities', *Proceedings of the Nutrition Society*, 35/1:134-135.

Tappan, J. (2017). *The Riddle of Malnutrition: The Long Arc of Biomedical and Public Health Interventions in Uganda*. Athens, OH: Ohio University Press.

The World Bank. (1993). *World Development Report 1993: Investing in Health*. New York: Oxford University Press.

Uganda Protectorate. (1952). *1951 Annual Medical Report*. Entebbe: Government Printer.

Uganda Protectorate. (1956). *1955 Annual Medical Report*. Entebbe: Government Printer.

Uganda Protectorate. (1958). *Labour Department Annual Report, 1957*. Entebbe: Government Printer.

Waliggo, J. (2013). 'The Bugandan Christian Revolution: The Catholic Church in Buddu, 1879-1896' in D. Maxwell with I. Lawrie (eds.) *Christianity and the African Imagination: Essays in Honour of Adrian Hastings*. Leiden: Brill. Pp.63-92

Watkins, S. Cotts. (2000. 'Local and Foreign Models of Reproduction in Nyanza Province, Kenya', *Population and Development Review*, 26:725-759.

Welbourn, H. (1956). 'Child Welfare in Mengo District, Uganda', *Journal of Tropical Pediatrics*, 2/1:24-31.

Welbourn, H. (1957). 'A Comparison between Children Attending Child Welfare Clinics in 1950 and in 1955', *East African Medical Journal*, 34/2:47-54

Widner, J. (1993). *The Rise of a Party-State in Kenya: From Harambee! to Nyayo!*. Berkeley: University of California Press.