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'SOMETHING A LITTLE BIT TASTY': WOMEN AND THE RISE OF NUTRITION SCIENCE IN INTERWAR BRITISH AFRICA

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‘SOMETHING A LITTLE BIT TASTY’:
WOMEN AND THE RISE OF NUTRITION SCIENCE IN INTERWAR BRITISH
AFRICA

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the College of Arts and Sciences
at the University of Kentucky

By

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Lexington, Kentucky

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ABSTRACT OF DISSERTATION

‘SOMETHING A LITTLE BIT TASTY’: WOMEN AND THE RISE OF NUTRITION SCIENCE IN INTERWAR BRITISH AFRICA

Widespread malnutrition after the Great Depression called into question the role of the British state in preserving the welfare of both its citizens and its subjects. International organizations such as the League of Nations, empire-wide projects such as nutrition surveys conducted by the Committee for Nutrition in the Colonial Empire (CNCE), sub-imperial networks of medical and teaching professionals, and individuals on-the-spot in different colonies wove a dense web of ideas on nutrition. African women quickly became the focus of efforts to end malnutrition due to Malthusian concerns of underpopulation in Africa and African women’s role as both farmers and mothers. Currently, the field focuses either on the history of nutrition science in Britain specifically, such as David Smith’s *Nutrition in Britain: Science, Scientists, and Politics in the Twentieth Century*, or broadly on the history of European scientists of all disciplines in Africa, such as Helen Tilley’s *Africa as a Living Lab*. Gendered medical histories in Africa tend to have a narrow geographical focus and a broad chronology, such as Henrietta Moore and Megan Vaughan’s *Cutting Down Trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890-1990*. This work enlarges the field both by linking British nutrition science to nutrition science in Africa, and by analyzing gendered colonial policy across space rather than across time. The dissertation examines the process by which colonial officials came to pin their hopes of ending malnutrition on the education of African women. Specifically, this project analyzes nutrition surveys from the League of Nations and the CNCE, as well as articles and pamphlets circulated by medical and education experts. Using circular dispatches from the Colonial Office and CNCE, meeting minutes from the Advisory Committee on Education in the Colonies, annual education reports, and medical journal articles, this work zooms out to show the global context of the interest in malnutrition and the scientific advancements of nutrition. Then, the dissertation zooms in to illustrate how those global concerns impacted women in Southern Nigeria, who used colonial education

for their own goals of professional advancement or marrying up rather than ending malnutrition. I argue that African women's education transitioned from under the control of missions to the control of the state as a result of the proposed solutions of colonial nutrition surveys. Furthermore, I argue that, as a priority of the colonial state, the pedagogy of African women's nutrition education became its own kind of colonial experiment as educators and students disagreed on the best means of relating the new knowledge of nutrition. In conclusion, the colonial state increasingly controlled African women's education by the end of the 1930s, and this focus on altering individual African women's food habits via education allowed the colonial state to take action to solve malnutrition without altering the colonial economy from which they profited. State-controlled education attempted to create a new kind of colonial subject concerned with science, which revealed the limits of state intervention and provided a new arena for African women to shape their own futures.

KEYWORDS: Britain, Empire, Women, Africa, Nutrition, Science

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For Jezebel, Delilah, and Lilith

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Introduction

“When you are unemployed, which is to say when you are underfed, harassed, bored, and miserable, you don't want to eat dull wholesome food. You want something a little bit ‘tasty’. There is always some cheaply pleasant thing to tempt you. Let's have three pennorth of chips! Run out and buy us a twopenny ice-cream! Put the kettle on and we'll all have a nice cup of tea! That is how your mind works when you are [on the dole].”¹

George Orwell's 1937 *The Road to Wigan Pier* captured the fraught relationship between income and food in interwar Britain, a time when malnutrition became a central concern of the British state. Expansive studies backed up what Orwell implied: poorer Britons had poorer nutrition. The impact of availability and affordability of food on nutrition in both Britain and the empire remained a source of debate throughout the interwar period. Ignorance of good nutrition, however, remained a quicker and easier problem to tackle. Women garnered particular attention from the state and nutrition experts, as they were the ones assumed to be feeding their families, were most likely to sacrifice their own nutrition for the sake of their families', and were the ones who possessed special nutritional needs during pregnancy. With these considerations in mind, women's nutrition education, both at home and abroad, became a growing state concern throughout the interwar period.

Newspapers captured the plight of malnourished Britons as vividly as Orwell. “Heroic Mother Starves in Silence” and “Hungry England” the papers proclaimed in 1933 upon the death of thirty-seven year old mother of seven, Minnie Weaving. While her official cause of death was pneumonia, the coroner ruled that the disease would not

¹ George Orwell, *The Road to Wigan Pier*. London: Victor Gollancz Ltd. 1937.

have killed her if she had not been so malnourished.² During the Great Depression, low wages, high rent, and the high cost of food plagued the British working class. While the government was less involved in managing the welfare of its citizens than it had been in World War I, it was still more hands-on than it had ever been before World War I. Cries for increased state intervention to assist needy Brits battled against small Depression-era budgets as the government slashed spending. Women, especially working-class women, were disproportionately affected as they went without in order to provide as much as they could for their families. At the same time, new standards of beauty promoted strong, fit women capable of producing the next generation of soldiers by both eating right and properly feeding their families.

The rise of nutrition science redefined what it meant to eat right. In the early 1920s, British scientists discovered the existence of nine vitamins and twelve minerals, which demonstrated that it was not only how much one ate, but rather the quality of what one ate that mattered. With these discoveries, the foundation of an adequate diet became objective, measurable, and quantifiable. For the first time, scientists demonstrated that it was not just the quantity of food, but the quality of the food that went into a nutritious diet. The scientific, and then political, vocabulary of diet became increasingly refined as scientists drew the distinctions between undernutrition, or inadequate calories, versus malnutrition, or inadequate vitamins and minerals. Nutrition scientists differentiated among various types of foods. Protective foods, full of vitamins and minerals, provided resistance to the diseases of malnutrition, such as rickets, beri beri, and pellagra. Energy-

² Ina Zweiniger-Bargielowska, *Managing the Body: Beauty, Health, and Fitness in Britain 1880-1939* (Oxford: Oxford University Press, 2010), 284.

giving foods, such as carbohydrates, fueled physical activity and labor. A mixed, or balanced, diet contained a variety of both protective and energy-giving foods.³ Scientists set to work trying to determine the optimum diet, or the ideal number of calories consumed through the perfect balance of protective and energy-giving foods, across gender, age, class, and racial categories. This pursuit of new knowledge of nutrition came to underpin British nutrition policy both at home and abroad.

Nutrition scientists and amateur advocates decried the fried and tinned diets of the average British person and began looking towards the simple, fresh diets they imagined the subjects of the colonial empire ate. The need to research further into the rapidly growing field of nutrition science prompted nutritionists to look towards colonial Africa, which struck them as the natural laboratory to collect information to help better feed the British; however, malnourishment in the colonies did not go unnoticed. A new wave of paternalism stoked a desire for the British government to help hungry Africans as well as hungry British people. In 1925, Dr. John Boyd Orr, armed with the recent discoveries of vitamins and minerals, began studying the nutrition of ailing African cattle. From there, Boyd Orr took notice of African people's nutrition and launched additional research studying Kenyan diets in the late twenties. By the thirties, Boyd Orr was a vocal advocate of better nutrition for Britain's poor.⁴ As in the metropole, the call for increased humanitarian intervention was greater than the government's coffers, so the dream of ending hunger in the colonies extended further than the reality.

³ Josep L. Barona and Josep Lluís Barona Vilar, *The Problem of Nutrition: Experimental Science, Public Health, and Economy in Europe, 1914-45* (Bern: Peter Lang, 2010); 37-8.

⁴ Michael Worboys, "The Discovery of Colonial Malnutrition between the Wars," in David Arnold, *Imperial Medicine and Indigenous Societies* (Manchester: Manchester University Press, 1988).

The most significant, broad context of the emergence of nutrition science was the end of the First World War in 1918, which marked a major shift in European and global society and politics. A renewed dedication to preventing another global war led to the creation of the League of Nations, a transnational organization spearheaded by Europe. Its aims were twofold: foster global cooperation to maintain peace, and improve the state of global welfare, including nutrition. In the aftermath of the war, Great Britain managed a larger empire than ever before, but these increased responsibilities led to increased anxieties about maintaining its might. The British also scrambled to address a harsh truth that the war had revealed: much of the country was in poor health, partly due to poor nutrition. Britain's social and political concerns prompted its cooperation within the League of Nations. The League, with Britain as a major player governing a quarter of the world's population, took up initiatives aimed at improving global nutrition. These initiatives would ultimately result in increased state focus on women's nutrition education.

Even before the close of World War I, however, anxieties of diminished national efficiency, reminiscent of the Boer War, motivated both politicians and the populace. Following the post-World War I fears of a nation of malnourished citizens, nutrition became an important part of the life reform movement, which emphasized health, strength, and beauty in all British citizens. These ideals, however, stood starkly at odds with the growing economic depression, and the Hungry Thirties saw an impassioned debate about the proper role of the government in ensuring the proper nutrition of its people. New institutions, such as the Ministry of Health; new economic policies, such as imperial preference; and new international projects, such as the African Research Survey,

swept across the empire in the interwar period. Local, central, and colonial governments balanced calls for increased intervention in citizens' and subjects' malnutrition as a matter of public health against retrenchment and the shrinking budgets of the Great Depression.

Spurred by anxiety over a malnourished and faltering empire, the British state launched an empire-wide survey investigating malnutrition. The survey focused in particular on both the metropole and colonial Africa, which experts considered underpopulated and in the most urgent need of improved welfare. A 1935 League of Nations report described how “in certain Asiatic colonies, there is a tendency towards overpopulation, while in Africa...the opposite trend is visible.” British scientists attributed Africa's perceived underpopulation to both poor resistance to diseases and to high rates of infant mortality, each of which could be traced back in large part to malnutrition.⁵ Inquiries into this problem in both Britain and Africa identified the root causes of malnutrition as poverty and the ignorance of both how to budget and how to select and prepare nutritious food.

In Britain, 1930s studies by the British Medical Association indicated that unemployment benefits did not adequately cover the cost food, implying that the state could do more to ameliorate British malnutrition. At the same time, surveys by nutrition experts revealed that poorer Britons had less access to nutritious food and thus ate poorer diets. In Africa, the role of the British state in exacerbating or failing to improve nutrition was even more complex. African patterns of agriculture determined diets within Africa.

⁵ Et. Burnet and W.R. Aykroyd, *Nutrition and Public Health*, 1935 NA, CAB 58/199.

Colonial agriculture radically disrupted native farming practices, which in turn radically disrupted African diets as well. Precolonial African farming had numerous fail safes in place to hedge against unpredictable and volatile tropical climates and thin soils. In West Africa, for example, African farmers employed polyculture, or planting several different kinds of crops in a single field. This practice protected the thin soil from erosion and ensured that, regardless of the level of rainfall that year, at least some of the crops would survive. In general, the African farming year cycled through seasons of harvest, rain, and hunger as food stores thinned just before the next harvest time.⁶

Colonial agricultural systems shifted from polyculture to monoculture in the pursuit of maximum profit from cash crops and an effort to rationalize what British agriculturalists saw as irrational and wasteful traditional methods. Arable land increasingly went toward white landowners and cash crop farms, leaving less and less for individual African subsistence farmers, who eventually used small plots in their own personal yards. Mine and farm workers also received meals on the job, and Africans living near more urban spaces also had access to European grocery stores in addition to African markets. The shift to monoculture farming transformed the traditional yearly fluctuation of extremes from harvest to hunger. The result was a more steady, year-round level of poverty and scraping to make ends meet and to grow and afford adequate, nutritious food.

⁶ Philip Curtin, "Nutrition in African History," *The Journal of Interdisciplinary History* Vol. 14, No. 2, Hunger and History: The Impact of Changing Food Production and Consumption Patterns on Society (Autumn, 1983), pp. 371-382; Audrey Richards and Elsie Widdowson, "A Dietary Study in Northeastern Rhodesia," *Africa IALC* Vol. IX No. 2 (April 1936) CAB 58/199.

This focus on “rational” western-style farming also led to an emphasis on growing the hardiest, highest-yielding monocrops in soils that were better suited to polyculture. Cassava, for example, grew faster and more easily than yams in single-crop plots, thus becoming a colonial favorite. According to colonial logic, cassava, grown in neatly-manicured, rationally laid out plots grew more abundantly, leading to more profit and greater food distribution to the native populations. Cassava, however, also had lower levels of protein and vitamins than its less hardy cousin, the yam. Prioritizing crop hardiness—using suboptimal agricultural methods for the soil and climate, no less—over nutrition content led to a general reduction in African nutrition levels in the 1920s.⁷

Precolonial African agriculture followed not only yearly patterns but broader patterns as well. If one region, which may have served several generations of Africans, ceased to yield adequate crops, the tribe migrated to a more fertile region nearby, and back again as the soil replenished in the original spot. This ability to mobilize and relocate to a more sustainable region served as another fail safe against hunger. As with other traditional agricultural practices, colonialism clamped down on the mobility of entire communities, enforcing sedentary settlements which were easier for colonial governments to control.⁸

Faced with the reality these changes brought, nutrition research sought to find solutions. Studies from the League of Nations as well as nutritional surveys in colonial

⁷ Jérôme Destombes, “From Long-term Patterns of Seasonal Hunger to Changing Experiences of Everyday Poverty: Northeastern Ghana c. 1930-2000,” *The Journal of African History* Vol. 47, No. 2 (2006), pp. 181-205; James Scott, *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1999).

⁸ Curtin, “Nutrition in African History.” 375.

Africa argued that reducing import taxes on nutritious food and allowing more mixed farming would improve nutrition in colonial Africa. In particular, League of Nations officials and colonial medical officers advocated for those two solutions. Reducing import taxes lowered the costs to African consumers, making healthy food cheaper. Sparing more land for mixed farming rather than concentrating it on cash-crop farming would enable more Africans to grow a greater variety of their own subsistence produce. More mixed farming on a larger scale would also enable greater economic independence for a given colony because it would be less reliant on food imports if it grew more of its own food itself. Putting money back in the pockets of African consumers took it out of the pockets of British farmers and British landowners in Africa, however, so colonial governors did not ultimately promote mixed farming.

Reluctant to tamper with unemployment benefits and colonial economies, central and colonial governments focused their solutions regarding malnutrition on ending ignorance by promoting nutrition education. This education primarily targeted women as the grocery shoppers and meal preparers. The British state invested in nutrition education programs in both Britain and Africa which were intended to create homemakers who knew how to inexpensively nourish their husbands and children. These programs fit into a pre-existing education model in Britain, but opened up a new arena of colonial experimentation in Africa.

As nutrition experts sought solutions to end hunger in the metropole and African colonies, there were multiple streams of information. Africa served as a laboratory that fed scientific information to the metropole, just as metropolitan experts went into the empire to spread new understandings of nutrition. A shift in colonial thinking and

administration occurred in the 1930s as both officials and scientists realized that they badly needed new, more, and better information on African environments, cultures, and diets. While remaining paternalistic, British nutritional experts were driven by the desire to accumulate colonial knowledge in order to be better stewards of the colonial empire in addition to helping the metropolitan population.

This desire to be better stewards stemmed from a much broader trend in Britain's relationship to the empire in the interwar period. After World War I, the League of Nations increasingly discussed the issue of self-determination for smaller, more disadvantaged states and peoples. As a result, the League implemented a paternalistic system of trusteeships in which powerful western nations were to serve as the mentors of colonial subjects whom they believed needed to be slowly shepherded toward civilization and self-government. Given Britain's increasingly souring relationship with India, the British state became more convinced than ever that it needed to take a different tack with the rest of the colonial empire. The British state could not give the rest of its subjects the tools to agitate for democracy and independence when it had no intention of granting independence in the foreseeable future.

Facing pressure from the Indian National Congress to prove why the British needed to continue ruling India, the British state also felt pressure to prove the legitimacy and value of the empire to its own subjects elsewhere. Britain's relationship to India played a large part in Britain's approach to the rest of the empire by the 1930s. Agitating strongly for Home Rule, the Indian National Congress called Britain's bluff as a worthy steward, casting doubt on the validity of the entire imperial enterprise. To justify its colonial holdings, the British state saw the need to retool its approach to colonialism to

avoid another India. In colonial Africa, this approach fixated on preventing detribalization, or the breakdown of African society, which the British feared would happen if they introduced too much “civilization” and westernization too quickly. Broadly, this new approach entailed a renewed dedication to colonial development, intended as a demonstration of the usefulness of Britain as a benevolent colonial ruler.

This dynamic intensified during and after the Great Depression. As Worboys argues, Britain attempted to use the flow of money and goods through the empire to solve the economic problems the depression wrought in both the metropole and the colonies. For example, instituting imperial preference in 1932 reduced economic competition and gave imperial sellers an edge in the world market.⁹ Additionally, the 1929 Colonial Development Fund provided financial support to British colonies, aiming to give them a boost toward economic self-sufficiency and eventually take the financial burden off the central British state. The Colonial Development Fund included funding for new schools as well as for campaigns to improve nutrition.

Nutrition in India had long occupied British state and scientific attention, even before the 1920s developments in nutrition science. The two major famines of the 1890s revealed the ineffectiveness of British famine policies that prioritized grain speculation and the free market over millions of starving Indians. Failing to demonstrate the utility of British rule in India, the British state faced increased campaigning for Indian self-government. By the 1930s, the British state turned instead to salvage its reputation with the rest of the colonial empire. The empire-wide nutrition surveys of the mid-1930s

⁹ Worboys, “The Discovery of Colonial Malnutrition,” 216.

reflect this attitude, as colonial Africa dominated the survey results while India appeared only occasionally.

The British state's relationship to nutrition in the empire intertwined with its role in the metropole. As for the presence of the empire in metropolitan thinking on nutrition, Porter's *Absent-Minded Imperialists* helpfully checks the expanding literature on the role that empire played in the metropole. There were certainly many debates, publications, exhibitions, and advertisements related to nutrition science that did not include the empire. Nevertheless, the empire informed both major scientific undertakings and policy decisions, and filtered down into popular media. The biggest name in interwar nutrition science in the metropole and the colonies was Boyd Orr, who worked extensively in both Britain and Africa. He conducted nutritional research in Britain, founding the Rowett Institute for Research into Animal Nutrition, which ultimately led him to study human nutrition as well. He published the groundbreaking 1936 *Food, Health, and Income*, arguing that higher incomes led to better diets. He also served on numerous boards dedicated to improving nutrition, such as the Ministry of Health's Advisory Committee on Nutrition, the Committee on Nutrition in the Colonial Empire, and in 1945, became the first Director-General of the Food and Agriculture Organization. Without his sustained analyses of nutrition in Africa, his pioneering scholarship and campaign for welfare reform in the metropole would not have happened.

The ideas generated in the metropole and in the colonies impacted each other. For example, British mothers raised their offspring with the health and strength of the empire in mind, and mission teachers encouraged African women to run their homes with proper British domesticity in mind, particularly in Nigeria where mission education was well-

established by the 1920s. While Nigerian and British women's experiences were often radically different from one another, the ideological underpinnings of motherhood and nutrition which informed women's treatment existed along the same continuum. For example, attaining social and racial progress through the increased government regulation of public health motivated officials in the metropole and the colonies. Malthusian fears of over- or under-population sent scientists into panics over whether the British Empire provided an adequately fit ruling class or adequate food for a growing African population. Officials routinely blamed poor mothers for their infants' poor health instead of the overarching, systematic problems of poverty and exploitative labor systems. The desire to create good British homes, housewives, mothers, and healthy babies across the empire justified the use of experts to inspect the homes and educate the populace that those experts deemed in need of reform. Finally, white, class-privileged women in both the metropole and the colonies used their femininity to become experts in their sphere, the home.

Of course, these concepts took drastically different turns in a colonial context than in the metropole. British experts approached African families as though they were mysterious, foreign, and unknown, relying on the field of anthropology to render African food systems legible to the British before they could embark on a project to try and improve them. Not without flaws, anthropologists and other experts suffered from colonial arrogance, which resulted in African voices getting distorted or ignored completely. African food systems were frequently met with harsh judgment by British experts who struggled to find an African diet that they found suitably balanced and nutritious without requiring British input. This judgment then paved the way for colonial

officials to radically disrupt traditional African farming and labor systems in attempts to enrich the colony and hope that it trickled down. These disruptions exacerbated problems of under-nutrition and malnutrition, justifying further colonial intervention.

In the context of increasing state intervention, British and African women did not passively receive these latest concepts of nutrition and mothercraft. Since nutrition played such a key role in the domestic sphere, more privileged and educated women became experts on the matter as formally-trained anthropologists, philanthropists, club organizers, or inspectors. While the majority of political and scientific authorities were men, the focus on women teaching other women nevertheless serves as an important undertaking because it illuminates a more nuanced understanding of the complex relationships of power both in the metropole and the colonies. Differing levels of race and class privilege reveal the ways in which women exercised some forms of power and stood on the receiving end of others.

In sum, widespread malnutrition both before and after the Great Depression called into question the role of the British state in preserving the welfare of both its citizens and its subjects. International organizations such as the League of Nations, empire-wide projects such as nutrition surveys conducted by the Committee for Nutrition in the Colonial Empire (CNCE), sub-imperial networks of medical and teaching professionals, and individuals on-the-spot in different colonies wove a dense web of ideas on nutrition. African women quickly became the focus of efforts to end malnutrition due to Malthusian concerns of underpopulation in Africa and African women's role as both farmers and mothers.

Ultimately, this dissertation seeks to address four main points: first, the dissertation argues that female nutrition education acted as the compromise between the state's desire to maintain laissez-faire economic policies and the state's desire to intervene on behalf of its citizens' and subjects' welfare, including their nutrition. While nutrition studies argued that both poverty and ignorance led to malnutrition in the metropole and the colonies, central and colonial governments did not want to intervene economically. They turned instead to the other perceived cause, ignorance, and focused on improving women's education to tackle that ignorance.

Second, the dissertation uses Nigeria as a case study to argue that the empire critically shaped metropolitan understandings of nutrition, and the presence of metropolitan ideas fundamentally shaped colonial African understandings of nutrition. The empire was not a one-way flow of ideas from metropole to colonies; it was instead a multidirectional flow as new knowledge created in the colonies went back to the metropole as well as to other colonies through conferences and publications.¹⁰

Third, the dissertation argues that colonial nutrition education pedagogy served as an arena to shape and contest the future of Nigerian women. British policymakers and teachers debated over how much hard science and literacy they should teach versus how much their lessons should simply focus on teaching nutritious recipes in cookery class. With their own ideas about how best to advance with a western education, African chiefs,

¹⁰ David Lambert and Alan Lester, eds., *Colonial Lives Across the British Empire: Imperial Careering in the Long Nineteenth Century* (Cambridge: Cambridge University Press, 2006) developed the notion of empire as a network, which has since been expanded in different directions, including imperial science as a network of people and ideas. For more on imperial science networks, see Brett Bennett and Joseph Hodge, eds., *Science and Empire: Knowledge and Networks of Science Across the British Empire, 1800-1970* (London: Palgrave MacMillan, 2011).

parents, and the Nigerian female students themselves all lobbied for their own version of Nigerian girls' nutrition education. While British teachers and African chiefs preferred to keep lessons simple and to use local ingredients, ambitious Nigerian women and their elite parents agitated for a more prestigious western education of literacy and English cookery.

The fourth and final main point of the dissertation is that the production and education of knowledge on nutrition was a deeply raced, classed, and gendered process. As wives and mothers in charge of feeding their families, women's knowledge of healthy diets became central to the project of improving nutrition. As research increasingly indicated the correlation between poverty and malnutrition in both the metropole and the colonies, a paternalistic hierarchy of middle-class white women made it their project to uplift working-class white women and Nigerian women. From anthropological and medical research on nutrition to the creation of nutrition education textbooks and syllabi, improving Nigerian women's nutrition became white women's work.

There remains considerable potential in writing histories situated at the intersection of food, gender, and culture in the British Empire. An analysis of those factors lies at the crossroads of a patchwork of historiographies, including histories of the empire, the engagement of the metropole in the empire (such as through philanthropy and mission work), histories of the colonies, environmental history, history of science, and the history of food in general. Chris Otter laid out a timely and useful historiography of British food history in 2012, entitled "The British Nutrition Transition and Its Histories," which demonstrates the growing scholarship on food in social and cultural history as well

as the history of the empire.¹¹ His historiography also reveals the continued dearth of gender as a category of analysis in British food history. This dissertation intends to aid in filling that gap.

A central tenet of this dissertation argues that the British state took an active interest in improving the nutrition of its citizens and subjects via nutrition education. Government attempts at systemically regulating and disciplining bodies cry out for Foucauldian analysis on the surface. Indoctrinating citizens into regulating their own behavior according to standards the government established, thereby fostering a regime of governmentality, had reached a new peak during World War I, setting new standards for state intervention in a variety of arenas. The notion of governmentality, however, is more useful for understanding the British mindset toward nutrition education than for understanding African realities on the ground.

As Vaughan unpacks so thoroughly in *Curing Their Ills*, the level of infrastructure required to bring about the kind of state control possible in the metropole did not exist in Africa. Nevertheless, regulatory regimes and increased state intervention in civilian health and daily life had become standard, if contested, practices in the metropole by the 1930s. The active, hands-on role of the state in managing citizens' lives underpinned British understandings of managing populations and shaped colonial education policy, even if the actual reach of the colonial state was minimal. Colonial education plans were predicated on the notion that they would reach all Africans, by spreading from students to their families and villages back home. In reality, the British

¹¹ Chris Otter, ““The British Nutrition Transition and Its Histories,” *History Compass* 10 no. 11 (November 2012): 812-825.

themselves estimated that colonial education reached only a small percentage of African girls and women, no more than a few hundred to a couple thousand per colony. British education policymakers' insistence on the importance of female education, juxtaposed against these stark numbers, revealed their willingness to blame African women for societal problems as well as their reluctance to fund initiatives aimed at helping them.

James Scott's *Seeing Like a State* serves as another overarching framework that speaks to the nature of this dissertation. Scott argues that imperial strategies failed because of a failure to take local knowledge into account, even using West African farming methods as a case study. In the specific case of nutrition education, this failure to account for local knowledge and lifeways also played out in distinct ways. The key to the British plan for nutrition education hinged on the assumption that African women cooked their nuclear families three square meals a day. Due to factors ranging from varying cultural norms to migrant labor practices, none of the variables in that equation existed as the British believed. Men working at the mines ate together from the cafeteria while the rest of their community back home ate segregated by sex rather than by family relation. Some Africans only ate once or twice a day. Some shared their meals with multiple wives. The British approach to educating "the African housewife" did not align with many African realities.

Currently, the field focuses either on the history of nutrition science in Britain specifically, such as David Smith's *Nutrition in Britain: Science, Scientists, and Politics in the Twentieth Century*, or broadly on the history of European scientists of all disciplines in Africa, such as Helen Tilley's *Africa as a Living Laboratory*. Gendered medical histories in Africa tend to have a narrow geographical focus and a broad

chronology, such as Henrietta Moore and Megan Vaughan's *Cutting Down Trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890-1990*. This dissertation engages the field both by linking British nutrition science to nutrition science in Africa, and by analyzing gendered colonial policy across space rather than a broad expanse of time. Examining Britain and Africa in a single analytical lens, this dissertation demonstrates the flow of people and information, more specifically teachers, students, and nutrition science, to and from metropole and colony.¹²

As for the broader context of nutrition in interwar Britain, Worboys' "The Discovery of Colonial Malnutrition between the Wars" is a concise overview of the international politics and economics at play in the rise of nutrition science in the 1920s and 30s.¹³ His most significant assertion is that the League of Nations and Britain had different approaches to solving the problem of malnutrition. He argues that while the League of Nations viewed malnutrition across the globe as a public health issue, Britain primarily viewed it as an economic problem. Different ways to frame the problem led experts to come to very different solutions, and the interplay between these different approaches is a key aspect of this dissertation, which seeks to put nutrition in the contexts of both politics and science, including the debates about the proper uses of both. While Worboys examines the beginning of the process of the British colonial state investigating nutrition, Brantley's *Feeding Families* follows a product of that process, the Nyasaland Nutrition Survey. Following a specific case study of one of the largest British nutrition

¹² David Smith, ed., *Nutrition in Britain: Science, Scientists, and Politics in the Twentieth Century* (New York: Routledge, 1997); Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge* (Chicago: University of Chicago Press, 2011); Henrietta Moore and Megan Vaughan, *Cutting Down Trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890-1990* (London: Heinemann, 1993).

¹³ Worboys, "The Discovery of Colonial Malnutrition," 208-225.

science projects, Brantley draws the useful distinction between British nutrition policy dreams and African realities on the ground.

Vernon's *Hunger: A Modern History* and Smith's *Nutrition in Britain: Science, Scientists, and Politics in the Twentieth Century* get more specifically at the political and scientific contexts.¹⁴ While Vernon's text is largely political, it is not a conventional political history, but rather focuses on the relation between mass media and politics. He argues that changing understandings, definitions, and representations of hunger changed the ways in which societies, particularly governments, responded to it as a social problem. He touches on empire but is mostly focused on the metropole. Likewise, Smith's text largely focuses on the scientists and doctors associated with nutrition, although different chapters relate the science to political and cultural contexts as well. In particular, the chapters by Blakestad and Williams examine different ways in which women got involved in the growing emphasis on proper nutrition.¹⁵ Respectively focusing on special programs for women on "home science," and women as philanthropists for maternal nutrition, these articles demonstrate the variety of roles that women played in educating other women on the importance of the latest information pertaining to good nutrition.

One of the few works of gender and food history that Otter cites is Ina Zweiniger-Bargielowska's *Managing the Body*, which analyzes the gendered body cultures of early twentieth-century Britain. Focusing on both masculinity and femininity, she demonstrates

¹⁴ James Vernon, *Hunger: A Modern History* (Cambridge: Belknap Press, 2007); Smith, *Nutrition in Britain*.

¹⁵ Nancy L. Blakestad "King's College of Household and Social Science and the Origins of Dietetics Education," in Smith, *Nutrition in Britain*; A. Susan Williams "Relief and Research: The Nutrition Work of the National Birthday Trust Fund, 1935-9," in Smith, *Nutrition in Britain*.

the intersections of culture and government in shaping the modern man and woman. Informed by eugenics, the drive for greater national efficiency came from both government institutions, such as the Ministry of Health, and voluntary organizations, such as the Health and Strength League. This dissertation is in part inspired by Zweiniger-Bargielowska's focus on gender and culture in the interwar period. While she focuses broadly on body culture, this dissertation will focus specifically on nutrition. Additionally, Zweiniger-Bargielowska focuses on the metropole but also examines the ways in which the empire impacted national efficiency concerns of both defense and population rates. This dissertation examines the role of empire even further by showing how good nutrition in the metropole became a new patriotic duty for white British women. Furthermore, concepts of good nutrition employed in the metropole shaped and were shaped by colonial Africa.

To get at this aspect of the empire as a nutritional lab, Tilley's *Africa as a Living Laboratory* provides a clear foundation.¹⁶ She focuses broadly on the African Research Survey, an international and interdisciplinary project of the 1930s that heralded a shift in colonial attitudes. Tilley examines a variety of scientific and social scientific fields that featured new projects in the 1930s, including nutrition. She argues that these new studies embodied a more genuine attempt on behalf of colonial powers to truly understand African environments and people, which their inclusion of African experts demonstrates. While Tilley looks at the big picture, my dissertation will look at the scientific field of nutrition in greater depth.

¹⁶ Tilley, *Africa as a Living Laboratory*.

Next, Moore and Vaughan's *Cutting Down Trees* uses anthropological and historical approaches to situate the current malnutrition problem in Zambia in its longer historical context.¹⁷ Demonstrating that western misunderstandings and judgments of Zambian farming methods have their roots in the nineteenth century, the authors argue that these misunderstandings were a product of colonial tone-deafness. Furthermore, the authors assert that colonial attempts to alter traditional Zambian farming methods served to construct Zambia as a problem to be solved rather than a place to be understood, which justified further colonial intervention. Furthermore, they argue that colonial knowledge production itself was its own kind of intervention. In particular, their chapter "Relishing Porridge: The Gender Politics of Food, Household Consumption and Diet in the 1930s" focuses on Audrey Richards' anthropological research with the Bemba. Additionally, they have helpfully reprinted some of Richards' unpublished works that can only be found in the archives. While Moore and Vaughan contextualize Richards' work within a long time span of Zambian history, this dissertation intends to embed Richards' studies in the immediate colonial and international contexts of the rise in nutrition science and colonial paternalism.

Burke's *Lifebuoy Men, Lux Women* and Schmidt's *Peasants, Traders, and Wives* each address different aspects of Zimbabwe, or Southern Rhodesia.¹⁸ Burke's text focuses on the British attempt to create African markets for products made in British factories. While Burke focuses on consumption and soap, his framework of British attempts to import British culture and values, resulting in tension between Africans and

¹⁷ Moore and Vaughan, *Cutting Down Trees*.

¹⁸ Timothy Burke, *Lifebuoy Men, Lux Women: Commodification, Consumption, and Cleanliness in Modern Zimbabwe* (Durham: Duke University Press, 1996); Elizabeth Schmidt, *Peasants, Traders, and Wives: Shona Women in the History of Zimbabwe, 1870-1939* (London: Heinemann, 1992).

the British, is a useful one for this dissertation. Proper cookery skills and food products sold by the British to Africans have a similar historical trajectory to the one Burke traces. While Burke's analysis includes some gender, Schmidt's work is centered on it. She argues that under colonialism, African patriarchs strategically allied with British colonial administrators to doubly oppress African women. As both she and Burke point out, in turn, those women made strategic alliances of their own, especially with missions that took them in and provided them with the kind of British education that might help them move up the social ladder. One clear example of the mission training of African women was the Jeanes program, an offshoot of an American education program which was established in Southern Rhodesia in 1929. This program trained African women in home science so they could in turn demonstrate what they learned to their fellow Africans, which supposedly recreated British domesticity in colonial Africa. While these authors focus on the range of skills these women learned, this dissertation intends to focus particularly on the food and nutrition lessons.

In writing about British and African women's roles in the empire, this dissertation aims to add to the budding scholarship on women in world history, a field which has much potential for future growth. Judith Zinsser's "Gender," in *Palgrave Advances in World Histories*, called for more women's history in world history and provided some suggestions about how to approach that subject. She argues against the "add women and stir" approach to history and reveals the shortcomings in the area of women's history for world history that continued to persist in the scholarship after the time of her writing. Zinsser's call for more work on women in world history informs this dissertation's transnational connections between women in the British empire. Rather than adding

women to the end of a narrative of empire, this dissertation illustrates the ways in which both British and African women were central to the functioning of the empire. Ending African women's malnutrition, a priority for British administrators working within the global aims of the League of Nations, came to be seen as the burden of white women to fix through education. Across the empire, women stood at the center of a global problem identified by a global institution.¹⁹

The nutrition regime was essentially about gender and race and provided a sphere for white women's activism, a dynamic which has its own robust historiography. Racialized conceptions of appropriate women's roles broadly in the domestic sphere, as well as cultural conflicts over what constitutes proper baby-feeding habits specifically, played out across the empire. For example, Hunt's "Bébé en Brousse" on milk substitution in the Congo demonstrates this dynamic clearly. Colonial nutrition education also fits within an even broader raced and gendered regime of hygiene more generally. Bickford-Smith's *Ethnic Pride and Racial Prejudice*, Bashford's *Imperial Hygiene*, and Burke's *Lifebuoy Men, Luxe Women* each demonstrate how personal and domestic hygiene formed the bedrock of the civilizing mission and imbued sanitary habits with raced and gendered notions of modernization and civilization.²⁰

Because of these and many other colonial practices, gender is a useful category for analyzing African history. Briefly, Hafkin and Bay's edited volume *Women in Africa*,

¹⁹ Judith Zinsser, "Gender," in Marnie Hughes-Warrington, ed., *Palgrave Advances in World Histories* (London: Palgrave MacMillan, 2005).

²⁰ Nancy Rose Hunt, "Bébé en Brousse: European Women, African Birth Spacing, and Colonial Intervention in Breastfeeding in the Belgian Congo," *The International Journal of African Historical Studies* 21 (1988): 401-32; Vivien Bickford-Smith, *Ethnic Pride and Racial Prejudice in Victorian Cape Town* (Cambridge: Cambridge University Press, 2003); Alison Bashford, *Imperial Hygiene: A Critical History of Colonialism, Nationalism, and Public Health* (London: Palgrave MacMillan, 2003); Burke, *Lifebuoy Men, Luxe Women*.

Robertson and Berger's edited volume *Women and Class in Africa*, and White's extensive work, including *Comforts of Home*, give a snapshot of the ways in which gender in African history intersect with social, cultural, economic, and scientific analyses. Booth's *Local Women, Global Science*, a gendered history of AIDS research in Kenya, and Vaughan's *The Story of an African Famine*, an analysis of the ways in which a global economy impacted women in colonial Malawi, create roadmaps for situating African women within broader global scientific and economic forces. Allman and Tashjian's "*I Will Not Eat Stone*" serves as a broad social history of female education in individual African colonies.²¹

In particular, the historiography of the role of the church comprises a critical subset of histories of gender, medicine, education, and Africa. Peele's *Religious Encounter and the Making of the Yoruba* provides the long history of missionaries in Nigeria, making a robust context for more specific works to fit within. Adewunmi Fajana's *Education in Nigeria*, a broad social history, illustrates the many intersections between Nigerian education and colonial missionary efforts, which provided the only colonial education for decades before the colonial state got involved. Colonial education and medical services remained crucial fixtures of colonial rule even after the state stepped in to regulate their efforts and add secular options to them. Both missionary and state education and medical services altered the ways in which African women raised their children and took care of

²¹ Nancy Hafkin and Edna Bay, eds. *Women in Africa: Studies in Social and Economic Change* (Stanford: Stanford University Press, 1976); Claire Robertson and Iris Berger, eds. *Women and Class in Africa* (New York: Africana Publishing Company, 1986); Luise White, *Comforts of Home: Prostitution in Colonial Nairobi* (Chicago: University of Chicago Press, 1990); Karen Booth, *Local Women, Global Science: Fighting AIDS in Kenya* (Bloomington: Indiana University Press, 2004); Megan Vaughan, *The Story of an African Famine: Gender and Famine in Twentieth-Century Malawi* (Cambridge: Cambridge University Press, 2007); Jean Allman and Victoria Tashjian, *I Will Not Eat Stone: A Women's History of Colonial Asante* (London: Heinemann, 2000).

themselves, as Vaughan's *Curing Their Ills* and Marks' *Divided Sisterhood* both illustrate. Finally, Mann's *Marrying Well* provides an old chestnut example of how Nigerian women strategically made use of colonial Christianity to carve out the best opportunities for themselves in a colonial system that stacked the odds against them. Summers' *Colonial Lessons* provides a history of mission education in Southern Rhodesia that illustrates the intersections between mission work and education in African colonialism.²²

Broadly, one of the most important concepts for doing colonial history is having the understanding that colonial theories and desires seldom looked like reality on the spot. Stoler gives one of the clearest examples of this dynamic by showing how racialized and racist ideas about colonial households got undercut by everyday habits practiced on the ground in colonial Java. Chanock's *Law, Custom and Social Order*, which examines the interplay between formal colonial law and informal colonial practice in Malawi, as well as Cohen and Odhiambo's *Burying SM*, which follows the postcolonial Kenyan struggle to balance two sets of legal systems inherited from colonialism, reinforce the notion that colonial theory and colonial practice often looked quite different. This notion remains true in the specific case of nutrition science education, which administrators

²² J.D.Y. Peel, *Religious Encounter and the Making of the Yoruba* (Bloomington: Indiana University Press, 2003); Adewunmi Fajana, *Education in Nigeria: An Historical Analysis* (London: Longman, 1978); Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Stanford: Stanford University Press, 1991); Shula Marks, *Divided Sisterhood: Race, Class, and Gender in the South African Nursing Profession* (London: Palgrave Macmillan, 1994); Kristin Mann, *Marrying Well: Marriage, Status, and Social Change among the Educated Elite in Colonial Lagos* (Cambridge: Cambridge University Press, 1985); Carol Summers, *Colonial Lessons: Africans' Education in Southern Rhodesia, 1918-40* (London: Heinemann, 2002).

dreamed would be a sweeping revolution, but which became an underfunded, sparsely-practiced reality.²³

While women's history and world history continue to bend slowly toward one another, British history has been quicker to align with world history. In an increasingly-globalized world, British historiography has been trending away from simply telling an island story to, instead, showing both how Britain shaped the world and also how the world shaped Britain. World history's emphasis on the multidirectional flow of people and ideas lends itself well to analyses of the British Empire. Cooper and Stoler's *Tensions of Empire*, Antoinette Burton's *Burdens of History*, and Hall's *Civilizing Subjects* represent classic examples of showing how the empire shaped the metropole as well as the other way around. For example, in *Tensions*, Davin's "Imperialism and Motherhood" details how metropolitan British mothers raised their children with the empire in mind, rearing the next generation of colonial administrators. Her analysis of the broad British concern for the health of British children helps set up my analysis of the specific health concern of nutrition. Britain's knowledge of the science of nutrition stemmed in significant part from studies conducted in Africa. Britain's concern over proper nutrition also stemmed in part from the desire to raise the next generation to be fit enough to govern the colonial empire. Arguing that knowledge and ideas of nutrition

²³ Anne Laura Stoler, *Carnal Knowledge and Imperial Power: Race and the Intimate in Colonial Rule* (Berkeley: University of California Press, 2002); Martin Chanock, *Law, Custom and Social Order: the Colonial Experience in Malawi and Zambia* (London: Heinemann, 1998); David Cohen and Atieno Odhiambo, *Burying SM: The Politics of Knowledge and the Sociology of Power in Africa* (London: Heinemann, 1992).

flowed from colony to metropole and back again comes out of a well-established historiographical tradition.²⁴

Recent scholarship on Britain and the world includes Burton's *The Trouble with Empire* and Erica Rappaport's forthcoming *Thirst for Empire: How Tea Shaped the Modern World*. If the earlier texts argue that the empire influenced Britain as much as Britain influenced the empire, Burton's latest work, *Trouble*, questions how much Britain was truly able to influence its colonies. She argues that trouble, in the form of colonial resistance, constantly plagued British rule. She draws back the curtain of Britain's imperial might to highlight the ways in which it was continually challenged and threatened by colonial inhabitants. Focusing on challenges to British political and economic control, Burton leaves the door open for work like mine to focus on the more quotidian ways that trouble constituted the fabric of empire.²⁵

Moving even more broadly, the comparative study of empires loops Britain into an even wider analytical lens for the study of world history. Burbank and Cooper's *Empires in World History* as well as Rizzo and Gerontakis's *Intimate Empires: Body, Race, and Gender in the Modern World* provide examples of using empire as a tool to analyze world history. While Burbank and Cooper's work gives a broad overview of world history, Rizzo and Gerontakis focus on the ways in which race and gender informed facets of everyday life for both colonizers and colonized peoples, including

²⁴ Frederick Cooper and Ann Laura Stoler, eds., *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997); Antoinette Burton, *Burdens of History: British Feminists, Indian Women, and Imperial Culture, 1865-1915* (Durham: University of North Carolina Press, 1994); Catherine Hall, *Civilizing Subjects: Metropole and Colony in the English Imagination 1830-1867* (Chicago: University of Chicago Press, 2002).

²⁵ Antoinette Burton, *The Trouble with Empire: Challenges to Modern British Imperialism* (Oxford: Oxford University Press, 2015); Erica Rappaport, *Thirst for Empire: How Tea Shaped the Modern World* (Princeton: Princeton University Press, 2017).

birth control, clothing, and cookery. They emphasize the syncretic nature of colonial cultures, showing how Europeans adopted as well as imparted parts of colonial cultures. This emphasis on hybridity helps to articulate the ways in which African classrooms adopted both British and African recipes and technologies to create a new kind of nutrition science lesson that was neither wholly British nor wholly African.²⁶

If British historians were quick to adapt world history to showcase the continued relevance of British history more broadly, Africanist historians remained more skeptical. Frustrated with the renewed popularity of world history just as African history emerged as a field of inquiry, Africanists worried that Africa would once again be lost in “the west and the rest” constructions of world history. For example, Frederick Cooper’s “What Is the Concept of Globalization Good For? An African Historian’s Perspective” evaluates his take on the pros and cons of world history approaches. Approving of world history’s move beyond national boundaries, he then puts forth a complex, “lumpy” approach that takes into consideration the ebbs and flows of populations and ideas over time, prioritizing not just the local or the global, but the connections in between. For example, he suggests historians look at noneconomic connections between two places: transcending nation-state boundaries but not approaching a global scope, analyzing the beginning, middle, and end of transnational connections gets at the mobility of peoples and ideas in a discreet, manageable region.

In a similar vein, Feierman’s “African Histories and the Dissolution of World History” argues that historians cannot simply add Africa to global history and stir, but

²⁶ Jane Burbank and Frederick Cooper, *Empires in World History: Power and the Politics of Difference* (Princeton: Princeton University Press, 2011); Tracey Rizzo and Steven Gerontakis, *Intimate Empires: Body, Race, and Gender in the Modern World* (Oxford: Oxford University Press, 2017).

must instead change the way they approach history and the categories of analysis they use: in privileging the global, the local can easily get lost or misconstrued. For example, Feierman cautions against historians beginning their global history from a European vantage point and judging the world by those standards. Cultivating a thorough understanding of African values from African perspectives is critical to an analysis of African history and its relation to other histories. Global historians must work to avoid a totalizing image of the world by punctuating overarching patterns with local particulars. This dissertation owes its approach in large part to these takes on world history. Following Cooper, I use a lumpy transnational framework, but following Feierman as well, I consistently pepper overarching global trends with analyses of local conditions in London and Lagos.²⁷

As a history of nutrition, the historiography of famine lays important groundwork for this dissertation. While my work focuses on the everyday colonial policies on nutrition, the policies in times of food crisis first garnered historical attention on the subject. Sen's classic *Poverty and Famines* disrupted the prevailing theory that famines predominantly occurred due to poor food production and distribution. Instead, Sen argues that complex systems of ownership and exchange mediate individuals' access to food, adding a critical dimension to understandings of famines around the world. In a similarly broad scope, Davis's *Late Victorian Holocausts* examines the far reaches of famines caused by weather patterns and exacerbated by ineffective economic policies at the turn

²⁷ Frederick Cooper, "What Is the Concept of Globalization Good For? An African Historian's Perspective" *African Affairs* 100 (2001): 189-213; Steven Feierman, "African Histories and the Dissolution of World History" in Robert H. Bates, V.Y. Mudimbe and Jean O'Barr, eds., *Africa and the disciplines: the contributions of research in Africa to the social sciences and humanities* (Chicago: University of Chicago Press, 1993).

of the twentieth century. His book illustrates the nineteenth century precedent for twentieth-century food and famine policies focused more on profit than on aid.²⁸

While Davis's work stretches beyond the British Empire, much work has been done on famine specifically within the British Empire, particularly in Ireland and India. For example, Nally's "'That Coming Storm': Irish Poor Law, Colonial Biopolitics, and the Great Famine" argues that famine policy reveals the tension between laissez-faire economics and social intervention. Furthermore, he argues that colonialism not only caused famines, but that the colonial state would then take advantage of famines to justify increased state intervention in people's lives. Nally links his article to further scholarship that connects famines in Ireland and India, including Bender's "'The Imperial Politics of Famine': The 1873-4 Bengal Famine and Irish Parliamentary Nationalism" and Gray's "Famine and Land in Ireland and India 1845-1880." Analyses linking up Ireland and India open up the space to add Africa to the comparative analysis. Iliffe's *Famine in Zimbabwe*, Watts's *Silent Violence*, Vaughan's *Story of an African Famine*, and Cliggett's *Grains from Grass: Aging, Gender, and Famine in Rural Africa*, each handle the topic of famine in Africa, with the latter two including special emphasis on gender. The extensive historiography on famine highlights the emergency policies put in place during times of acute crisis. As such, these works provide crucial context for the everyday policies put in place during times between crises, which often followed similar

²⁸ Amartya Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981); Mike Davis, *Late Victorian Holocausts: El Nino Famines and the Making of the Third World* (London: Verso, 2002).

lines of logic in which the state sought to extend aid, but not at the expense of profit from agricultural trade.²⁹

Finally, as a history of nutrition science, this dissertation intersects with historiographies of food. Because of a centuries-old global food trade, food emerged as a clear entry into world history analyses. World history staples including Alfred Crosby's *Columbian Exchange* and Sidney Mintz's *Sweetness and Power* set an early precedent for the utility of food as a way to approach global connections and exchanges. *Writing Food History: A Global Perspective*, edited by Kyri Claflin and Peter Scholliers, as well as Rappaport's *Thirst for Empire*, demonstrate the continued usefulness of food as a category of world history analysis. While food and nutrition science stand as two distinct entities in theory, the practice is messier. Nutrition science education in colonial Africa transformed into the dissemination of recipes and cookbooks catering to local cuisine while introducing European practices as well. Analyzing how changing understandings of

²⁹ For more on Irish and Indian famines, see: Cormac Ó. Gráda, *Ireland's Great Famine: Interdisciplinary Perspectives* (Dublin: University of Dublin Press, 2006); Robin Haines, *Charles Trevelyan and the Great Irish Famine* (Dublin: Four Courts Press, 2004); James S. Donnelly, *The Great Irish Potato Famine* (London: Sutton Publishing, 2001); Christine Kinealy, *The Great Irish Famine: Impact, Ideology and Rebellion* (London: Palgrave, 2001); David P. Nally, *Human Encumbrances: Political Violence and the Great Irish Famine* (Notre Dame: University of Notre Dame Press, 2011); David Hall-Matthews, "Inaccurate Conceptions: Disputed Measures of Nutritional Needs and Famine Deaths in Colonial India," *Modern Asian Studies* 42 (2008); Nally, "That Coming Storm': The Irish Poor Law, Colonial Biopolitics, and the Great Famine" *Annals of the Association of American Geographers* 98 (2008); Jill Bender, "'The Imperial Politics of Famine': the 1873-4 Bengal Famine and Irish Parliamentary Nationalism" *Area and Ethnic Studies* 42 (2007); Peter Gray "Famine and Land in Ireland and India 1845-1880: James Caird and the Political Economy of Hunger" *The Historical Journal* 49 (2006); Vaughan, *Story of an African Famine*; Lisa Cliggett, *Grains from Grass: Aging, Gender, and Famine in Rural Africa* (Ithaca: Cornell University Press, 2005); John Iliffe, *Famine in Zimbabwe 1890-1960* (Masvingo: Mambo Press, 1990).

nutrition science altered local diets, and the limits of those understandings and alterations, adds a new dimension to the rich historiography of food in world history.³⁰

Emerging from this rich historiographical context, this dissertation shows how research in the 1920s and 30s in Africa led to new discoveries in the science of nutrition. The League of Nations and the British state wanted to use that new knowledge to improve the nutrition of its citizens and subjects, and those citizens and subjects played active roles in that project. This dissertation centers on how women's education emerged in colonial administrators' thinking as the most important intervention in preventing malnutrition, and how that education model, formulated in Britain and carried out by British teachers, evolved on the ground in response to Nigerian students and environments. While administrators heralded nutrition science education as the best solution, it did not significantly intervene to reduce malnutrition. Nutrition education illustrated both the limits of colonial power and the ability of Nigerian women to use colonial education for their own ends. First, this dynamic demonstrates the limits of nutrition education specifically: just because Nigerian women's education did not accomplish what the League of Nations or British state thought it would did not mean it did not accomplish anything—it helped Nigerian women achieve their own personal goals. Second, this dynamic also demonstrates the limits of the relationship between international organizations, the British state, and colonial subjects more broadly, by disrupting the concept of a streamlined, unified colonial mind and demonstrating the

³⁰ Alfred Crosby, *Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport: Greenwood Publishing Group, 1972); Sidney Mintz, *Sweetness and Power: the Place of Sugar in Modern History* (London: Penguin Books, 1986); Kyri Claflin and Peter Scholliers, eds., *Writing Food History: A Global Perspective* (London: Bloomsbury Academic, 2012); Rappaport, *Thirst for Empire*.

importance of local conditions and Nigerian creativity in approaches to trusteeships and colonial policy.

To illustrate these points, this dissertation is broken down into four chapters. Chapter one traces the colonial line of thinking from the interwar discovery of malnutrition to the decision to focus on female education as one of the main solutions. Malnutrition, once rendered quantifiable by the discovery of vitamins and minerals, sprang to the fore as a global problem. International, national, and sub-imperial organizations spurred the search for more and yet more data on the state of nutrition across the globe. Within the British Empire, metropolitan Britons' health remained the primary concern. Malthusian fears of an underpopulated Africa—and thus a labor shortage—also pinpointed colonial Africa as the starting place for colonial efforts to improve nutrition. A colonial committee devoted to the task reviewed a decade of nutrition research, open to a multitude of possible solutions. After reviewing the data, the committee settled on two main solutions to ending malnutrition: more scientific research on nutrition, and female education.

Chapter two provides an overview of the structure of that female education in both Britain and Africa by comparing a school in London to a school in Lagos, Nigeria. In both places, it made the most sense to incorporate nutrition education into pre-existing classes on the topics of food and cooking, which were handled under the broad subject of domestic science. Looking at the facilities, degrees, courses, and exams for domestic science programs in both Britain and Nigeria, the chapter argues that the Nigerian domestic science classroom became a space of hybrid practices as Nigerian students learned both British and Nigerian recipes using Nigerian kitchen facilities. British

domestic science teachers and Nigerian students each learned techniques from the other in order to cook food in their domestic science classrooms.

Chapter three delves into the competing philosophies underpinning domestic science education pedagogy in Africa. After the inadvertent creation of a discontented, westernized elite in India, British education policymakers were anxious not to repeat the experience. Instead, many British teachers in Africa wanted to experiment with new education techniques that altered as little of Africans' daily habits as possible, adding in only minor changes informed by western nutrition science. Nigerian elites, by contrast, wanted to provide a western education, particularly English literacy, for their children to consolidate their elite status. Elite young Nigerian women agitated for a third option: they used the British interest in their cookery lessons to learn pastry-baking and English recipes, both of which served as status-markers for women aiming to marry into the Nigerian elite. Different groups of people had different visions for African women's futures. Based on those competing visions, each group lobbied for a different kind of education to achieve that future. While state interest in African female education increased due to attempts to improve nutrition, class was only in session when Africans chose to show. To recruit and maintain students, British teachers had to compromise and teach subjects that their students wanted, which sometimes included literacy or cake-making rather than nutrition science.

Finally, chapter four argues that there was another important factor at work in the creation and expansion of domestic science education: British emphasis on character-building. Rooted in Victorian mission tradition, the colonial project of trying to build African character via education continued into the interwar period. Education

policymakers hoped that domestic science education would impart qualities such as resourcefulness, reliability, and efficiency to their African pupils. British teachers in colonial Africa also emphasized the character that new teachers would require, albeit for different reasons. Conditions on the ground in Africa stood in such stark contrast to conditions in Britain that a positive attitude became at least as important a credential as a domestic science degree. The intangible quality of character occupied an important space in British discussions of colonial nutrition education.

Ultimately, local, central, and colonial governments navigated a fraught atmosphere in which their responsibility to maintain the welfare of citizens and subjects, including their nutrition, struggled with prewar laissez-faire ideals. Female education emerged as a compromise course of taking action that did not threaten the free market and profit from agricultural trade. Just as food circulated through the empire, so too did nutrition education pedagogy, textbooks, and teachers. The empire created a multidirectional flow of goods, ideas, and people as female nutrition education expanded in both Britain and Africa. While that education expanded, so did the debates around it, as teachers and students across Britain and Africa debated the best way to provide an education that set African women up for success. The nutrition education debates continued throughout the 1930s until the outbreak of World War II, when both Britons and Africans had bigger fish to fry as the war opened up new nutritional questions and challenges.

Chapter 1

Sustaining the Banana Republics: British Colonial Solutions to African Malnutrition

In the early 1930s, a British anthropologist was studying the native diet of a tribe from the Gold Coast when an African man asked the anthropologist what a British diet was like. Upon hearing the answer, the African man exclaimed, “what, no porridge? I call that starvation.”¹

This exchange illuminated some of the challenges of studying African colonial nutrition between the wars. An African man in the Gold Coast was sure to have a different perspective on malnutrition than an African woman in a neighboring colony, a medical officer, a governor, a Colonial Office committee member, or a British representative of the League of Nations. In the 1930s, a dense network of institutions and individuals tackled what researchers had identified as the problems of malnutrition. At local, national, and international levels, a variety of initiatives took shape with the goal of ending malnutrition across the globe. Drawing on different perspectives and funded unequally, different groups approached the problem of nutrition from different angles and arrived at different conclusions. The League of Nations, concerned not only with global political stability but also global health and well-being from its inception, generally took a humanitarian approach. Funding widespread research on nutrition, the League called on individual nations to take action, locating responsibility for ending malnutrition squarely with the state.

¹ M. and L. Fortes, “Food in the Domestic Economy of the Tallensi,” *Africa* IIALC Vol. IX No. 2 (April 1936) CAB 58/199.

Responding to the League's call for state action, the British government in turn conducted extensive research into nutrition and created smaller governing bodies across the empire to respond to the local conditions that research illuminated. While largely independent from one another, these committees were also in frequent communication, as they advocated a holistic, cooperation-oriented approach. The main committee responsible for studying and improving colonial malnutrition was the Committee for Nutrition in the Colonial Empire (CNCE), which was established in 1935, reviewed the state of nutrition across the colonial empire, and further delegated responsibility based on its findings. Coordinating with colonial governors, medical officers, and agricultural officers, the CNCE found itself engaged in a balancing act between the bird's eye view of the League and officials from different fields who were on the spot. Working with these different groups, the CNCE cooperated with two other committees, one devoted to interpreting nutrition research and one devoted to tailoring colonial education to incorporate the findings of that research.

The Advisory Committee for Education in the Colonies (ACEC), established in 1924 as an expanded version of the Advisory Committee on Native Education in British Tropical Africa, worked under the Colonial Office and in tandem with the CNCE after its creation. Ultimately, after a few years of nutrition research, the ACEC created a subcommittee focused on the education of African women and girls. The latter committee drew on the findings of the former to create a policy of improving African nutrition through the education of women and girls. These committees and the communications between them formed a complex matrix of thought on colonial African nutrition policy and education. The ACEC Subcommittee itself acted within a wide, intersecting network

of mission and state educators, medical doctors, scientists, anthropologists, and Africans of different ranks, ages, and genders. From above, the Subcommittee received input from a humanitarian-minded League of Nations and a largely economic-minded Colonial Office. From below, the Subcommittee received input at the sub-imperial level from colonial Agricultural, Educational, Veterinary, and Medical Departments as well as African chiefs and communities. The Subcommittee represented a central node of colonial thought on nutrition that both tried and failed, at different times and in different ways, to serve everyone with whom it corresponded.²

The ACEC appointed the Subcommittee in 1939 with the goal “to report on the means of accelerating social progress in the colonial empire by raising the standard of education of women and girls and by welfare work among them.”³ While the specific Subcommittee was not created until the end of the decade, various colonial experts and entities had collected considerable data on the subject over the previous ten to twenty years. The Subcommittee attempted to collate this data to assess the status of female education and devise a new policy going forward. Rife with uncertainty, the Subcommittee arrived at a central idea: solving the African nutrition problem rested on improving the education of African women and girls.

The impetus for the Subcommittee was to create a cogent response to numerous circular despatches which made the rounds through African colonial governments in 1936-7. These despatches included nutrition and domestic science surveys sent out from the Secretary of State for the Colonies, an article by a British professor of domestic

² Sonia F. G. Parkinson, *Sir Hanns Vischer*, in Clive Whitehead, *Colonial Educators: the British Indian and Colonial Education Service, 1858-1983* (London: I.B. Tauris, 2003); 106.

³ “Introduction,” Advisory Committee for Education in the Colonies, Subcommittee for the Education and Welfare of Women and Girls CO 859/1/9.

science, and an article by a British female doctor working in Africa and India. The open-ended questions of the early surveys paved the way for the narrowly-focused articles, which in turn served as the final prompt for the Colonial Office to designate a specific committee devoted to the goal of improving African colonial malnutrition via African women's nutrition education. By the end of the 1930s, the state decided to focus its resources on African female education as a solution to colonial malnutrition because of the outcomes of numerous, sometimes contradictory findings of international, national, and sub-imperial measures to study the problem.

This chapter seeks to make four main points. First, the chapter argues that overlapping, uneven networks of both institutions and individuals held competing visions of the underlying causes of malnutrition and the solutions to it. Second, it argues that the British government faced pressure to improve nutrition in both the metropole and colonial Africa. In both cases, the state ultimately chose to target ignorance, especially women's ignorance, more than poverty, as the root cause of malnutrition. Third, the chapter argues that early Colonial Office surveys on the state of colonial nutrition provided a space for colonial officials to explore a wide variety of solutions to malnutrition, where education was considered one of numerous potential solutions. In exploring all the different solutions available to try, tension between medical officials' focus on public health and governors' focus on the economy became clear.

Two main factors steered colonial governments toward an increased interest in African women's education as a solution to malnutrition: colonial governors' reluctance to reduce import taxes to make food more affordable to consumers, and colonial governors' reluctance to allow more mixed farming at the expense of cash crop farming. Fourth, the

chapter argues that the final push for the Colonial Office to formally make African women's nutrition education a priority came from a female public health advocate and a female advocate for British women's nutrition education, each confirming that ending women's ignorance, rather than ending poverty, was key to ending malnutrition.

The Interwar Context of Nutrition Science

The application of scientific knowledge and principles to food, what ultimately became nutrition science, emerged in the 1920s in a broad global context. World War I led to advancements across medical and scientific fields, including nutrition. The fitness of soldiers had also led Europeans to be increasingly interested in questions of nutrition. Within this context, the British Empire also saw a renewed dedication to proving that colonialism benefited the colonies and that Britain served as a worthy steward of them. Frederick Lugard's 1922 *The Dual Mandate in Tropical Africa*, asserting that Britain could both profit and serve as a trustee in charge of both the peoples and resources of its colonial empire, stoked the desire for a recommitment to good colonial governance. In the metropole as well as the colonies, good governance increasingly came to be seen as underpinned by accurate medical and scientific research informing national and colonial policy. This desire for good governance thus manifested most clearly in the waves of scientific and medical research conducted in the empire during this period. Colonial officials hoped that spreading scientific advancement throughout the empire would legitimize Britain's presence in its colonial holdings.⁴

⁴ Barona and Vilar, *The Problem of Nutrition*, 24-25, 28-29; Dane Kennedy, *Britain and Empire, 1880-1945* (London: Routledge, 2002); 63; Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge* (Chicago: University of Chicago Press, 2011).

This process of securing and justifying the legitimacy of colonial rule emerged in large part through discourses of development. The buzzword of the interwar period, development served as a kind of twentieth-century civilizing mission, but in the interwar period, the gospel of empire was science. Coming out of a nineteenth-century tradition of the attempted religious conversion of colonial subjects, scientific experts and educators in the interwar period proselytized western science and medicine. A significant shift occurred in the interwar period that disrupted the evolution of the colonial civilizing mission: British experts increasingly studied and valued native methods and knowledge. The interwar period was characterized by a renewed desire for good governance informed by the latest scientific research. British scientists undertook sweeping new projects to understand the colonial empire, with particular emphasis on Africa, incorporating local knowledge to a greater extent than ever before.⁵

It was within this context that nutrition science first appeared in Britain in 1925 when Dr. John Boyd Orr, funded by the Empire Marketing Board and armed with the recent discoveries of vitamins and minerals, began studying the nutrition of ailing African cattle. From there, Orr took notice of African people's nutrition and launched additional research studying Kenyan diets in the late twenties and British diets in the early thirties. Invigorated by the latest discoveries, medical doctors and scientists embraced the application of science to the study of nutrition, bolstered by the League of Nations' global inquiry into nutrition. Because of their sizable empire, the British led the way in the project of collecting data on the chemical composition of food and the dietary

⁵ Tilley, *Africa*, 69-73.

habits of people around the world, including considerable research across colonial Africa. Acting within the scope of the widespread African Research Survey, in which researchers across numerous disciplines sought to gather new scientific knowledge on the African continent, chemists, soil scientists, and anthropologists set to work throughout the 1930s to understand nutrition from social, scientific, and medical angles. Their research indicated that while death from starvation was relatively rare in Africa, inadequate diets were widespread across the continent.⁶

Between 1912 and the end of the 1930s, European and American scientists discovered the existence of nine vitamins and twelve minerals. With these discoveries, the foundation of an adequate diet became objective, measurable, and quantifiable. For the first time, scientists demonstrated that it was not just the quantity of food, but the quality of the food that went into a nutritious diet. The scientific, and then political, vocabulary of diet became increasingly refined as scientists discovered and drew the distinctions between undernutrition, or inadequate calories, and malnutrition, or inadequate vitamins and minerals. Nutrition scientists differentiated between various types of foods. Protective foods, full of vitamins and minerals, provided resistance to the diseases of malnutrition, such as rickets, beri beri, and pellagra. Energy-giving foods, such as carbohydrates, fueled physical activity and labor. A mixed, or balanced, diet contained a variety of both protective and energy-giving foods.⁷

The project at hand quickly became the scientific determination of the optimum diet, or the ideal number of calories consumed through the perfect balance of protective

⁶ Michael Worboys, "The Discovery of Colonial Malnutrition between the Wars," in David Arnold, *Imperial Medicine and Indigenous Societies* (Manchester: Manchester University Press, 1988), 208-225; CAB 58/ 199. Tilley, *Africa*, 73, 77; CAB 58/ 199.

⁷ Barona and Vilar, *The Problem of Nutrition*, 37-8.

and energy-giving foods, across gender, age, class, and racial categories. The determination of the optimum diet had implications far beyond the field of nutrition science. Changes in the science of nutrition led to changes in the place of nutrition in political, economic, and cultural intervention, both in Europe and in the colonial empire. With the quantification of an adequate diet, it followed that diet could be studied and regulated by that science. In the view of the League of Nations as well as Britain, the best science available underpinned good governance, and cutting-edge nutrition science revolutionized the definition of good governance as states could now use science to understand and optimize citizens' and subjects' nutrition and thus their overall health. The more accurate and encompassing the scientific knowledge, the better the capacity of the state to utilize it, which prompted international, national, and sub-imperial organizations to prioritize increased nutrition research.⁸

Coming from a humanitarian perspective, the League urged its members to make healthy food affordable to all their citizens and subjects by reducing taxes on imported food and encouraging mixed farming. These recommendations were easier for the humanitarian League to make than they were for individual governments to enact. For Britain in particular, African colonial governments' goal had been to prioritize the economic self-sufficiency of their respective colonies. The League's recommendations of deprioritizing cash crops and reducing farmers' profit margins clashed with the pre-existing economic goals of African colonial governments. The more that African colonies paid for food imported from Britain, and the cheaper African colonies sold their cash crops, the more affordable food became in metropolitan Britain. To follow the League's

⁸ Barona and Vilar, *The Problem of Nutrition*, 37-8.

economic recommendations in Britain often meant discarding them in the colonies. From a public health perspective, however, the League's goals meshed much more naturally, and many colonial health practitioners came out in support of the League's food policy suggestions.⁹

The Domestic Problem of Nutrition in Britain

The British government deviated from the goal of the League of Nations on more than just economic issues. British anxiety over the state of nutrition also stemmed from holding together a vast but precarious empire, coupled with the harsh reality of the unfitness of prospective soldiers in World War I. Echoing a similar set of concerns after the struggle to win the Boer War, the interwar British state saw a renewed effort to improve national fitness by improving nutrition and the deficiency diseases malnutrition caused. The rallying cry focused on transforming Britain from a "C3" to an "A1" nation, drawing on military designations for levels of health and fitness for fighting. In the age of total war, a permanent standing army of A1 citizens had become a necessity. Ensuring the accessibility and knowledge of good nutrition served as an important step in the creation of that army.¹⁰

While scientific and political interest in the field of nutrition arose immediately after World War I, the Great Depression stalled the efforts that researchers had begun in the 1920s, even as it made questions of nutrition, and the costs of nutritious food, that much more important. Balancing a prewar desire to keep central government small and a

⁹ Barona and Vilar, *The Problem of Nutrition*, 28, 31; Worboys, "The Discovery of Malnutrition," 220; Tilley, *Africa*, 73-5.

¹⁰ Zweineger-Bargielowska, *Managing the Body*, G.R. Searle, *The Quest for National Efficiency* (Amherst: Prometheus Books, 1990); Davin, "Imperialism and Motherhood," in Ann Stoler and Frederick Cooper, *Tensions of Empire*, University of California Press, 1997.

postwar desire to use the central government as a vehicle for providing beneficial services, scientists and doctors working on nutrition research sat on a spectrum of prescribed solutions to malnutrition ranging from almost exclusively blaming poverty to almost exclusively blaming ignorance. While British nutrition experts acknowledged that “no two [experienced physician] observers employ the same criteria” when “assessing nutritional status,” acknowledging the problem was only half the battle.¹¹ Nutrition experts from a variety of institutional bodies ultimately failed to coherently organize and move forward on a concrete set of solutions. The Ministry of Health, reluctant to open up an economic can of worms by laying the blame mainly on poverty, established the Advisory Committee on Nutrition (ACN) in 1931, and rendered it ineffectual by filling it with experts who disagreed bitterly on the root causes of malnutrition. The ACN above all did not want to make nutrition into “a far-reaching economic issue, which is most important to avoid—an issue which might easily affect wages, cost of food, doles, etc.”¹² As a result, they argued that adequate diets were, indeed, affordable, even on unemployment benefits.

Around the same time, the British Medical Association (BMA), using a different, more flexible set of nutritional standards than the ACN had created, released a report that also sought to determine the minimum cost of an adequate diet. While the ACN’s report did not significantly challenge the status quo of unemployment benefits, the BMA’s estimates of the cost of an adequate diet were higher. These higher estimates set off a chain of implications about the rates of the doles and the cost of food. The ACN balked at

¹¹ Burnet and Aykroyd, *Nutrition and Public Health*, 1935 NA, CAB 58/199.

¹² Madeleine Mayhew, “The 1930s Nutrition Controversy,” 447-52, cited in Wendy Way, *A New Idea Each Morning: How Food and Agriculture Came Together in One International Organisation* (Canberra: ANU E Press, 2013), 155.

what they perceived as the lax nutritional standards and smeared the BMA report as a “Labour Party tract.” Despite the controversy, the central government, siding with the Ministry of Health’s findings, considered the matter settled. If the problem were not mostly economic, then the problem must have been mostly ignorant housewives’ poor budgeting.¹³ As far as experts in charge were concerned, women needed to learn how to be more efficient shoppers and cooks if they were going to make Britain well-nourished again.

While the British government did not want to make dramatic interventions in the realm of nutrition, 1933 saw a slew of government actions that impacted nutrition. In that year, the beginning of imperial preference spelled the end of the Empire Marketing Board, nudging the invisible hand of the market toward British trade interests, including food imports and exports. While the League of Nations viewed the food trade as a global system, the British shaped their own imperial food system within it, prioritizing affordable food in Britain and profitable cash crops abroad. 1933 also saw the establishment of institutions such as the Milk Marketing Board intended to regulate and inspect the quality and safety of food. Balancing a prewar desire to keep central government small and a postwar desire to use the central government as a vehicle for providing beneficial services, these institutions promised to improve British nutrition by providing quality, affordable, nutritious food.¹⁴

The central government was not the only institution involved in improving nutrition. Elementary schools incorporated more nutrition propaganda, such as posters.

¹³ Way, *A New Idea*, 155; David F. Smith, ed., *Nutrition in Britain: Science, Scientists, and Politics in the Twentieth Century* (New York: Routledge, 1997), 152.

¹⁴ Kennedy, *Britain and Empire*; Barona and Vilar, *The Problem of Nutrition*, 36-38, 47-52, 64.

Colleges, universities, and other institutions such as *Good Housekeeping* began offering more educational opportunities for women to learn about nutrition science as it applied to cookery, from informal workshops to three-year college degree programs. Housewives' efficiency and rationality in budgeting the grocery shopping dominated medical memoranda and magazines alike.¹⁵

Lawmakers in both Britain and Africa came to their conclusions based on the available scientific data on nutrition, although British and African nutrition studies were typically quite different in character and scope. In Britain, scientists conducted big, broad surveys, notably John Boyd Orr's 1936 *Food, Health, and Income* and William Crawford's 1937 *The People's Food*, with interviewers going door to door and interviewing, in some cases, up to 5,000 households about their incomes and dietary habits. These large surveys already painted a grim picture of the state of nutrition in England, with Orr's study estimating that up to half the population ate an insufficient diet. More targeted studies threw these figures into even sharper relief, highlighting the acute struggles of families with unemployed breadwinners and schoolchildren from poor families. A nutritional study in rural England proved that malnutrition was not just an urban-overcrowding and unemployment problem. The study showed that one-third of children in agricultural communities also suffered from inadequate nutrition.¹⁶

At the same time in the colonial context, nutrition in the colonies was driven by a spectrum of both similar and different motivations and questions. Ignorance and poverty stood as the same root causes of malnutrition, but malnutrition was more widespread and

¹⁵ Zweineger-Bargielowska, *Managing the Body*, 256.

¹⁶ John Burnett, *Plenty and Want: A Social History of Food in England from 1815 to the Present Day* (New York: Routledge, 1989), 305.

the reach of regulating institutions was not. In colonial markets at the other end of the imperial food system, the affordability of nutritious food in the colonies came second to cash-crop farming and taxes that favored white land owners and metropolitan British grocery shoppers.

The 1929 Colonial Development Act enabled the British government to fund colonial economic development to spur eventual economic self-sufficiency. By the end of the 1930s, the 1940 Colonial Development and Welfare Act eased up on the goal of self-sufficiency and rededicated the use of scientific research to expanding services provided by the colonial state. Thus, in the 1930s, the desire to make each individual colony profitable shaped nutrition research and policy. But the struggle to achieve this goal led to a more relaxed colonial policy by 1940. The decade of the 30s served as the lab for experimenting with different agricultural methods and policies with the aim of improving nutrition while also attempting to make a profit and keep food prices down for metropolitan Brits. These goals, frequently at odds, shaped the studies of and responses to nutrition in colonial Africa at every level of discussion, from individual colony to the Colonial Office to the League of Nations.¹⁷

As with other fields of scientific research, nutrition scientists incorporated local African knowledge into their studies. For example, a 1936 special issue of the International Institute for African Languages and Culture's journal *Africa* focused on the study of native nutrition. The articles, written by several different kinds of researchers approaching nutrition from various angles, revealed the challenges of nutrition science in

¹⁷ Tilley, *Africa*, 71-73.

Africa and the ways in which local knowledge of diet complicated western understandings of colonial science.¹⁸

One article described how the South African Institute for Medical Research set out to catalogue edible native plants, only to have anthropologists discover that 300 species flagged as inedible were in fact being eaten by native South Africans. In another example previously referenced in the introduction to this chapter, a British anthropologist in the Gold Coast studied the native diet of the Tallensi. One day after being questioned about his own diet, an African man asked the anthropologist what a British diet was like. Upon hearing that the typical British diet consisted of meat, fish, bread, and eggs, he responded incredulously, “what, no porridge? I call that starvation.” The disconnects between native practice and colonial theory highlighted the urgent demand for more nutrition research on the African continent.¹⁹

The special issue of *Africa* and other research emerging from Africa in the 1930s revealed additional ways that the discovery of nutrition science complicated society and colonialism. Hailey’s *An African Survey*, for example, illustrated how improving nutrition required both social and scientific changes. In the arena of agriculture, for example, the survey stated that scientists needed to continue researching ways of improving crop yield, especially for newly-introduced crops from other regions. The survey pointed out that increasing the amount of nutritious food produced would not be of much use if Africans could not be persuaded to incorporate the new foods into their

¹⁸ *Africa* IIALC Vol. IX No. 2 (April 1936) CAB 58/199.

¹⁹ Ellen Hellmann, “Urban Native Food in Johannesburg,” *Africa* IIALC Vol. IX No. 2 (April 1936) CAB 58/199; Tilley, *Africa*, 73; M. and L. Fortes, “Food in the Domestic Economy of the Tallensi,” CAB 58/199; Tilley, *Africa*, 69-71.

diets. Scientific advancements had to be bolstered by social changes to be effective. It would take the combined efforts of scientific advancement and civilizing propaganda to provide mixed diets in colonial Africa. These observations reinforced a common theme propounded by the League of Nations—improving nutrition would require experts and solutions from many different angles, and fostering a taste for nutritious diets was an important part of the colonial mission.²⁰

The League of Nations Turns to the Problem of Nutrition

By the mid-1930s, new waves of committees formed and new waves of research commenced both in Britain and the League of Nations. In June 1935, the *Quarterly Bulletin of the Health Organization* published Burnet and Aykroyd's "Nutrition and Public Health." Their article, for the first time, set out the official standards of malnutrition while also acknowledging that the science of nutrition was new and imprecise. Shortly after the publication of Burnet and Aykroyd's ground-breaking article, the Assembly of the League of Nations brought up questions of nutrition, leading to the creation of the Mixed Committee on the Problem of Nutrition, which conducted its first session in February of 1936. The goal of this committee was to research malnutrition on a global scale. Their motto, one member half-joked, should be "enquiries and still more enquiries." Their findings, based on research compiled and printed in 1936-7, focused on Europe, the United States, and the Dominions. They expressed interest in more research on Africa and Asia. Their reports included a patchwork of topics, including education. The committee attempted to be as comprehensive as possible, using whatever information

²⁰ *The African Research Survey* CO 847/ 4/1.

they had on each country. While the League viewed nutrition as a global issue and intended to conduct studies on a global scale, they had to start with what information they had, which was unsurprisingly centered on the West. While they intended to expand their research, they began with where they perceived the problem to be most immediate: the countries that League members saw as savaged first by the Great War and then by the Great Depression.²¹

The League of Nations called on individual member states to take action based on the scientific findings of the League's Committee. The League's broad focus on protecting civilians through good governance applied specifically in the case of nutrition. Their first report argued that responsible governments needed to take action to fight malnutrition within their borders. This call, coupled with the desire for more research in Africa and Asia, spoke directly to Britain and its empire. The report affirmed that "A national nutrition policy requires the supervision of some central authority having special responsibility for this matter, in order to utilize to the best advantage the teachings of science and to apply them in the practical field. There must be cooperation between bodies engaged in research on the one hand and authorities and organizations responsible for the administration of public assistance and for education and popular instruction on the other." The League called for a streamlined operation, with all moving parts operating toward the common goal of better nutrition worldwide. This call dovetailed closely with the British government's own desire for a more streamlined colonial empire, in which

²¹ Burnet and Aykroyd, *Nutrition and Public Health*, 1935 CAB 58/199; Barona and Vilar, *The Problem of Nutrition*, 32-33; Et. Burnet and W.R. Aykroyd, *Nutrition and Public Health*, 1935 CAB 58/199; *Report of the Subcommittee on Food Statistics of the Mixed Committee on the Problem of Nutrition*, 1936 CAB 58/199; Economic Advisory Committee, Committee on Nutrition in the Colonial Empire, *The Problem of Nutrition—Interim Report*, 1936 CAB 58/199; Barona and Vilar, *The Problem of Nutrition*, 32-33.

colonial governments could operate more smoothly because they were better informed about what policies worked best for other colonies. Within each colonial government, too, the desire for streamlining of different government departments, more often a goal than a reality, nevertheless underpinned the approach to colonial nutrition policy. The League's call also reiterated the theme of the necessity of a multidisciplinary approach. Social and dietary customs needed to change in order to incorporate better dietary habits based on scientific principles. This concept was why education would be considered just as important to the project of improving colonial nutrition as scientific advancement, both of which needed to be managed by the state.²²

The British state heeded the League's call to take action to combat malnutrition, starting its own initiatives within both metropolitan Britain and the colonial empire. Since, up to this point, the League's data mostly focused on Europe and the Dominions, the Mixed Committee expressed a desire to collect more information on the state of nutrition in the rest of the world. Accordingly, the British state turned its focus to encompass the colonial empire. As the League saw nutrition as a global issue tied to a global food system, the British state saw nutrition within its own borders as tied to its empire-wide system of food production, imports, and exports. Feeding metropolitan British civilians affordable, nutritious food depended on having healthy, adequately-nourished farmers in the colonies producing plenty of crops for export back to Britain. Cash crop-based colonial economies led to those colonies' dependence on imported food, meaning that citizens and subjects across the empire depended on each other for access to

²² Economic Advisory Committee, Committee on Nutrition in the Colonial Empire, *The Problem of Nutrition—Interim Report*, 1936 CAB 58/199; Tilley, *Africa*, 73.

affordable, balanced diets. To produce enough foodstuffs, farmers needed to be both healthy enough to work hard and knowledgeable enough to use the latest, most efficient farming methods. Access to both the food and the knowledge depended on empire-wide networks of foodstuffs and information.

The British Secretary of State for the Colonies Responds

In response to these networks and shortly after the creation of the League's Mixed Committee, Dr. J. H. Thomas, British Secretary of State for the Colonies, sent out a short article called "Nutrition Policy in the Colonial Empire: Despatch from the Secretary of State for the Colonies, Dated 18 April, 1936." As the most politically influential and geographically widespread empire in the League, Britain's participation played a key role in the global project to end malnutrition. Thomas's emphasis on women's nutrition and on native education set the tone early on for potential solutions to colonial malnutrition. As Secretary of State for the Colonies, Thomas believed in the role of the state to ameliorate malnutrition. Like the League of Nations, he contended that the solution to malnutrition lay with the state, but first he needed to discover through further research the courses of action for the state to take.²³

In this article, Thomas addressed colonial governments, arguing that nutrition was a public health, economic, and agricultural problem. The causes of malnutrition were varied and interwoven, he asserted, and so the solutions would also necessarily be multiple and interrelated. He explained how investing in the improvement of colonial nutrition as a public health issue would lead to greater agricultural outcomes and thus

²³ J. H. Thomas, *Nutrition Policy in the Colonial Empire*, Despatch from the Secretary of State for the Colonies, April 1936 CAB 58/199.

economic improvements: “I do feel that within [a given colony’s] own borders increased attention to dietetic needs might well lead to an amelioration of some of its own economic problems. Not only will greater consumption of foodstuffs within each territory...increase the local market for local food products, but also expenditure on improved nutrition may well be directly remunerative itself, leading as it should to a greater wellbeing, greater efficiency in production and less waste of human life and effort.” He wanted colonial governments to understand that they could maximize labor in the colonies, and thus improve the economy, by improving their levels of nutrition. Since public health, agriculture, and the economy were so tightly linked, Thomas explained, lifting the standard of health in the colonies would also help raise agricultural production and profit.²⁴

The research being conducted on nutrition in the empire would only help the goal of improving public health through improved nutrition. In light of this new, scientific perspective on nutrition in the colonial empire, Thomas called for a survey to study the current state of malnutrition across the empire. He wanted the survey responses from each colony to include an overview of the current knowledge of nutrition and a description of what nutrition research should be undertaken next. He also inquired about what “practical measures” had already been taken to apply nutrition science to nutrition policy, and which measures would be taken to do so in the future. Finally, he wanted an overview of “the consequences which improvements in nutrition may have upon the economy...” The goal was to organize and streamline current knowledge of nutrition

²⁴ Thomas, *Nutrition Policy in the Colonial Empire*, Despatch from the Secretary of State for the Colonies, April 1936 CAB 58/199.

science and its application to the colonies. Getting a bird's eye view of the work being done and of the current state of nutrition across the empire would help create an overarching colonial policy on nutrition.²⁵

As Secretary of State for the Colonies, Thomas already had some ideas about colonial nutrition policy in mind. He impressed upon the colonial governments various government departments needed to cooperate in order to combat malnutrition. While cooperation across institutions was critical for ending malnutrition, and though Thomas considered the Medical Department the main institution for tackling the problem of malnutrition, he contended that “apart from the Medical Department, the most obvious agency for effecting improvements in nutrition is the school.” He went on to explain how “[i]n a variety of ways it is possible to instil[sic] into the younger generation improved ideas on diet, for instance, by lessons in cooking, and domestic science and by encouraging the development of school gardens...” For Thomas, building up a healthy future generation of colonial subjects, ready to be productive laborers for the colonial state, started with a solid education on nutrition. Though he did not specify female students in his description of nutrition education, domestic science was a specifically female course of study. Thomas singled out native women's education as one of the main solutions to colonial malnutrition.²⁶

Finally, in keeping with his argument that colonial malnutrition had multiple origins that necessitated multiple solutions, Thomas addressed how colonial economics

²⁵ Thomas, *Nutrition Policy in the Colonial Empire*, Despatch from the Secretary of State for the Colonies, April 1936 CAB 58/199.

²⁶ Thomas, *Nutrition Policy in the Colonial Empire*, Despatch from the Secretary of State for the Colonies, April 1936 CAB 58/199.

could work in conjunction with the Medical and Education departments to improve nutrition. He stated, “I consider it of the greatest importance that the Tariffs of Colonial Dependencies should be framed in such a way as to encourage as much as possible the consumption of foodstuffs of high nutritive value.” He went on to explain that while lowering duties and tariffs to make food more affordable for native consumers had gotten “little attention” thus far, he urged that it was as important a piece of the puzzle as other solutions to malnutrition. Colonial governments, he insisted, needed to prioritize making healthy food affordable to native consumers.²⁷

In particular, the survey focused on colonial Africa, which experts considered underpopulated, in the most urgent need of improved welfare, and with the most untapped potential for natural resources. Colonial governors and scientists knew the importance of local conditions and how they varied from place to place, creating different diets and dietary problems across the continent. Nevertheless, British administrators in London continued to view colonial Africa as one large unit to study. From this British perspective, “Africa” stood as one problem to be solved and one laboratory to provide researchers with new scientific insights. The *African Research Survey* project, a massive undertaking to conduct research across scientific disciplines, epitomized this point of view.²⁸

A 1935 League of Nations report described how “in certain Asiatic colonies, there is a tendency towards overpopulation, while in Africa...the opposite trend is visible.”

²⁷ Thomas, *Nutrition Policy in the Colonial Empire*, Despatch from the Secretary of State for the Colonies, April 1936 CAB 58/199.

²⁸ Tilley, *Africa as a Living Laboratory*; Joseph Morgan Hodge, *Triumph of the Expert: Agrarian Doctrines of Development and the Legacies of British Colonialism* (Ohio University Press, 2007).

British scientists attributed colonial Africa's perceived underpopulation as the result of both poor resistance to diseases and high rates of infant mortality, each of which could be traced back in large part to malnutrition.²⁹

Scientists and policymakers only wished that the same extensive surveys undertaken in Britain could sweep across the continent of Africa, where nutrition data remained sparse and incomplete. One prominent scientist explained that "Africa, at the moment, may be compared to a nutritional laboratory in which innumerable experiments on controlled diet have been progressing for about a hundred years or so,"³⁰ ramping up after the discovery of the new science of nutrition. The nutrition studies largely fell into two camps: anthropological surveys and chemical analysis experiments.

Anthropological dietary surveys sought to describe native diets without changing them, so policymakers could understand the situation on the ground before making any changes. Audrey Richards' detailed surveys on the dietary habits of Africans in Northern Rhodesia, particularly her discussion of women's relationship to food production, preparation, and consumption, stood out as some of the most complete work on the subject. Richards emphasized the social and cultural influences on native food choice and tried to add nuance to scientific and political understandings of native dietary habits.

Nutrition scientists, by contrast, tested the chemical composition of native foods and tinkered with the composition of native diets in any controlled population they had access to. These included prisons, asylums, hospitals, and boarding schools. For example,

²⁹ Et. Burnet and W.R. Aykroyd, *Nutrition and Public Health*, 1935 NA, CAB 58/199.

³⁰ E.B. Worthington, "On the Food and Nutrition of the African Natives," *Africa IALC* Vol. IX No. 2 (April 1936) NA, CAB 58/199.

in one 1937 experiment in a Kenyan prison, ten prisoners received 20% more wheat flour in their meals than the other prisoners, while a control group of five prisoners received no wheat flour at all. Very quickly, scientists observed that the men eating the extra flour gained weight, a welcome effect given that scientists considered many inmates, and Africans generally, underweight. The purpose of these experiments was to discover the optimum diet for Africans, and whether or not that diet were the same for other races. Scientists wanted to know if nutrition data from African experiments could be applied cross-racially to Europeans, and they also wanted to make sure that the nutrition standards informing African education were accurate.

Furthermore, attempting to establish the standards of optimum diet would have profound implications for both agricultural practices and the global food economy, both of which the British state was loath to change. The League of Nations put forth the notion that people had a right to good health, and good nutrition became an important feature of that right. If everyone in the world required access to a mixed diet, the League contended, then the world economy needed to make access to affordable, healthy food central to economic policy by whatever means necessary. The League considered malnutrition during times of agricultural surplus irrational. As Sen argues in *Poverty and Famines*, however, “starvation is the characteristic of some people not *having* enough food to eat. It is not the characteristic of there *being* not enough to eat.”³¹ Distribution of food, not just production, played as important a role in malnutrition as it did in outright starvation.

³¹ Sen, *Poverty and Famines*, 1.

Making mixed diets available around the world in every season hinged on a global system of food trade with improved shipping and refrigeration. In the interwar period, particularly after the Great Depression, this global system tilted increasingly toward favoring western countries, whose citizens not only desired but felt entitled to the affordability and availability of foods from around the world.³² While Burnett's *Plenty and Want* demonstrates how this global agricultural and economic system made cheap fruits and vegetables more accessible than ever to Britain, Rotberg's *Imperialism, Colonialism, and Hunger* shows how this system strained the disadvantaged parts of the world responsible for growing that produce in bulk. Britain's imperial system of colonial cash-crop economies fit inside this global system of trade designed to benefit western consumers at the expense of colonial producers. As Rotberg argues, under British colonialism, African resources went toward exports and diverted away from local food production. Keeping costs low and abundance high for western consumers meant keeping profits and arable land low for colonial producers.³³

While the Secretary of State for the Colonies "consider[ed] it of the greatest importance that the Tariffs of Colonial Dependencies should be framed in such a way as to encourage as much as possible the consumption of foodstuffs of high nutritive value," individual colonial governors had different motives. Rotberg cautions that it is too simplistic to say the whole empire acted as one, conspiring to center Britain and exploit Africans; on the ground, British colonial governments and land owners wanted to make a profit and be financially independent from central government handouts. The end results

³² Sen, *Poverty and Famines*, 1; John Burnett, *Plenty and Want: A Social History of Food in England from 1815 to the Present Day* (New York: Routledge, 1989), 286.

³³ Robert Rotberg, *Imperialism, Colonialism and Hunger: East and Central Africa* (Lanham: Lexington Books, 1983), 141.

of those individual motives, nevertheless, entailed a lopsided economy that benefited Britain. African colonies got the worse end of the deal on trade terms that Rotberg describes as “externally imposed... abnormally unstable,” and “inherently unequal.”³⁴ As global food prices fell after the Great Depression, for example, Burnett shows how metropolitan Brits benefited from cheaper groceries while colonial producers suffered from lower wages.³⁵ This economic structure disproportionately impacted women as the subsistence farmers, pressured to produce more nutritious food for their families on shrinking personal plots. This uneven system thus also made nutritious diets more available and affordable to western consumers than to colonial producers.³⁶

The League of Nations approached the issue of nutrition as part of its larger project of the mandate system, in which powerful western countries acted as the trustees of the “child races of the world.”³⁷ The League envisioned improving nutrition as an important part of shepherding the mandate system’s colonial territories towards western conceptions of civilization. Coming from a humanitarian if paternalistic perspective, the League urged its members to make healthy food affordable to all their citizens and subjects by reducing taxes on imported food and encouraging mixed farming. These recommendations were easier for the League to make than they were for individual governments to enact. While the League of Nations viewed the food trade as a global system, the British state shaped its own imperial food system within it, prioritizing affordable food in Britain and profitable cash crops in the empire. With British citizens

³⁴ Rotberg, *Imperialism, Colonialism, and Hunger*, 141.

³⁵ Burnett, *Plenty and Want*, 320.

³⁶ Barona and Vilar, *The Problem of Nutrition*, 32-33; Hodge, *Triumph of the Expert*, 169; Plummer, *About Your Food*, 35.

³⁷ “Native Races and Peace Terms,” *Anti-Slavery Reporter and Aborigines’ Friend* (July 1916), 34-5, in Pederson, *Guardians*, 24.

and colonial subjects on opposite ends of a single food system, the British state enacted economic policies that benefited British producers and consumers at the expense of colonial ones.

British African colonial governments' goal had been to reduce their dependency on the financial support of the British state. To this end, colonial governors sought to make their cash crop exports more profitable. The League's recommendations of deprioritizing cash crops would reduce white farmers' profit margins, which clashed with the pre-existing economic goal of African colonial governments. Furthermore, because of the emphasis on cash-crop farming, white farmers owned most of the arable land in the colonies, leaving colonial subjects, generally women, with small backyard plots for subsistence farming. Supplemental food purchased at a market came at a high price due to the cost of importing that food. While those import taxes existed to help British farmers profit by exporting their crops to the colonies, colonial Africans paid the price.³⁸

The more that African colonies paid for food imported from Britain, and the cheaper that African colonies sold their cash crops, the more affordable food became in metropolitan Britain and the more expensive it became in colonial Africa. Ultimately, to follow the League's economic recommendations in Britain often meant discarding them in the colonies. Since altering the agricultural and economic systems was off the table, the colonial state looked to other causes and solutions for improving nutrition.³⁹

³⁸ Burnett, *Plenty and Want*, 305; Rotberg, *Imperialism, Colonialism, and Hunger*, 141, 146.

³⁹ Susan Pedersen, *The Guardians: The League of Nations and the Crisis of Empire* (Oxford: Oxford University Press, 2015), 2, 24; Barona and Vilar, *The Problem of Nutrition*, 28, 31; Worboys, "The Discovery of Colonial Malnutrition between the Wars," 216; Tilley, *Africa as a Living Laboratory*, 73-5.

Heeding the League of Nations' call for greater attention to global malnutrition, Thomas took the first step toward assembling all the current knowledge of colonial nutrition and the state of malnutrition in the British Empire. His recommendations to colonial governments included prioritizing the Medical and Education Departments, advising greater cooperation between those Departments, and emphasizing women's health and native education. These recommendations lay the foundation for all the subsequent work on devising an overarching colonial policy on nutrition.

The Committee on Nutrition in the Colonial Empire

In response to the Mixed Committee on the Problem of Nutrition, the early responses from Dr. Thomas's April 1936 despatch, and the suggestion of the new Secretary of State for the Colonies David Ormsby Gore, the British government created the Committee for Nutrition in the Colonial Empire that October. It functioned under the umbrella of the Economic Advisory Committee and in cooperation with the League's Mixed Committee.⁴⁰ Shortly after the creation of the CNCE, Ormsby Gore sent out another circular despatch informing colonial governments of the new committee and its purpose. Building on Thomas's initial inquiry into the state of nutrition and working in conjunction with the League of Nations, the CNCE looked forward to the cooperation of colonial governments and their continued efforts to send information on nutrition to the Colonial Office. Based on the results of scientific studies commissioned by African colonial governments, the replies to the CNCE revealed that reducing taxes on imported

⁴⁰ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Memoranda Vol. I*, 1936-7 CAB 58/199; Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Extract from the House of Commons Parliamentary Debates on Nutrition Problems*, 1936 CAB 58/199.

fruits and vegetables enabled native consumers to eat more nutritious food. The replies also revealed colonial governors' reluctance to reduce import taxes because of the profit it would cost the colony at a time when the goal was greater economic self-sufficiency.

Acting alongside the League of Nations and the Colonial Office, the CNCE believed in the importance of scientific research to governing well. The stated goals of the CNCE included surveying the current state of nutrition in the colonies, and brainstorming solutions to any problems of malnutrition the survey uncovered. In addition to analyzing data they received from colonial governments, the committee also examined reports from the League of Nations.⁴¹

The CNCE conducted its first meeting at Whitehall in November of 1936. Membership and attendance mildly fluctuated but there were about fifteen members of the CNCE, many of them influential figures from various fields who already had years of experience working in Africa and other parts of the empire. There was some overlap between membership in the CNCE and membership in other significant committees. For example, the CNCE chairman, Earl de la Warr, also served as a representative to the League of Nations. Edward Cathcart, Edward Mellanby, and John Boyd Orr also served on the Ministry of Health's body for investigating metropolitan questions of nutrition, the Advisory Committee on Nutrition. Philippa Esdaile also sat on the Advisory Committee for Education in the Colonies. Other members of the CNCE included prominent anthropologist Audrey Richards, as well as F. A. Stockdale, the Agricultural Adviser to

⁴¹ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire *Memoranda Vol. I*, 1936-7 CAB 58/199.

the Secretary of State for the Colonies, and Thomas Stanton, the Chief Medical Adviser to the Secretary of State for the Colonies.⁴²

At the outset, the chairman of the committee explained that “the acquisition of new knowledge” on nutrition, and “the methods by which the knowledge already available could be given practical effect” were the primary interests of the committee. Their interest in the “practical effect” of nutrition science knowledge, combined with Thomas’s attention to the “practical measures” of applying that knowledge, created a space for discussing a variety of strategies. The CNCE acknowledged the variations in nutrition across the empire as a feature they wanted to be sensitive to in their analyses. For the most part, they wanted to think broadly and ask questions rather than dole out answers. In the early phases, they tried to understand the lay of the land before devising a plan to move forward. In their first meeting, they discussed the medical and economic sides to nutrition, and “several members of the Committee referred to the . . . importance of education and propaganda in promoting the application of an improved nutritional policy.” On “the question of . . . promoting further dietary and health surveys” Esdaile also “referred to the importance of education.” The broad category of “practical measures” was where discussions of education happened. When colonial governments were prompted to name the “practical measures” they were taking, that section of responses was where they discussed the state of nutrition education in their respective colonies. At this stage of enquiry, the “practical measures” section was a place not only for colonies to describe what they were already doing, but to imagine future possibilities as well. In this

⁴² Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *First Meeting Minutes*, 1936 CAB 58/199.

way, governments and the CNCE could explore both the reality of current education systems and the potential for expanded future education systems as approaches to nutrition. In the replies to the CNCE, education existed as one solution among many to the problem of malnutrition.⁴³

While the CNCE investigated the entire colonial empire, colonial Africa garnered special attention on the issue of nutrition, beginning as early as the 1920s, for several reasons. First, colonial experts viewed Africa as a giant living laboratory full of diverse populations and climates ideal for studying. Colonial officials also perceived Africa as being underpopulated relative to the rest of the empire, so they wanted to focus their efforts on bringing the population up to what they thought were appropriate levels. Related to this point, colonial officials also perceived Africans as lagging the furthest behind in other terms of colonial development, such as education. By the 30s, colonial Africa had a very different relationship to Britain than colonial India did. While India had also served as a sort of colonial lab in the late nineteenth and early twentieth centuries, political tensions led scientists to look for less fraught colonies to study as India increasingly agitated for independence in the 30s.

Since the colonial government replies responded to a specific set of questions, they followed a general formula. The colonial governor typically forwarded copies of Thomas's despatch to authorities in different fields, such as the Agricultural and Medical Officers, who then added their own responses. When they sent their findings back to the governor, he added his own commentary. The collective replies from representatives of

⁴³ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Third Meeting Minutes*, 1937 CAB 58/199; Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *First Meeting Minutes*, 1936 CAB 58/199.

the colonial government, agricultural, and medical departments went back to the CNCE in London for review.

Following the order of Thomas's questions, replies described the state of nutrition, listed the "practical measures" being taken to improve nutrition as well as spread knowledge of it, and explained the consequences of improving nutrition in their colony. While individual officers of a given colony might disagree on the severity of the problem of malnutrition, malnutrition touched at least some populations of each colony. Specifically asked to describe the "practical measures" of spreading scientific knowledge of nutrition, colonial governments used this space to address the state of nutrition education and its utility for improving nutrition. The "practical measures" section also allowed colonial governments to respond to the suggestion of lowering tariffs and other economic measures. Finally, being asked to describe the "consequences" gave colonial governments space to vent their Malthusian anxieties of increasing the population, and imperiling their economy, if nutrition levels were improved. These anxieties prompted medical and agricultural officers to use the language of profit to justify improving nutrition.

Following are some representative examples of different responses from colonial Africa to Thomas's circular and their concerns about education and the economy. They include two examples from West Africa and an exception from East Africa. Their responses began to give a clear picture of what types of interventions were desired by colonial governments and what types of interventions they generally wanted to avoid. While earlier scholarship depicts the tension between humanitarianism and profit as occurring between the League and the British government, tension between colonial

governments and other administrators was just as clear. While medical and education officers frequently echoed the League's call for prioritizing the affordability of healthy food, governors tended to shy away from economic solutions and stress colonial education instead.⁴⁴

For example, in the case of colonial Nigeria, the CNCE not only received written responses but was also able to interview Walter Johnson, Nigeria's Medical and Sanitary Services Director. The CNCE based its interview with Johnson off of Thomas's despatch, discussing both "practical measures" for ending malnutrition and the "consequences" of doing so. In a discussion of the "practical measures" for ending malnutrition, Johnson discussed the research that had been done on Nigerian nutrition and the work left to do. He stated that "of course, the difficulty always has been applying what we have learned to the people and we are trying as hard as we can to do it through schools, which seems to be the only practicable way of getting it across to the people." Even though there were maternity and infant welfare clinics and exhibitions that both doled out information on good nutrition, Johnson thought that their scope was too limited. The schools, more than any other event or institution, stood the best chance at reaching the greatest number of people.⁴⁵

The next exchange on education truly captured both the obstacles and the optimism of fighting malnutrition through education. A committee member remarked to Johnson, "You rather suggest, I think, that the hope of improvement of general nutrition lies through the schools, or very largely through the schools, but of course, the schools in

⁴⁴ Worboys, "The Discovery of Colonial Malnutrition," 216.

⁴⁵ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Notes of Sir Walter Johnson, Medical and Sanitary Services, Nigeria, to Committee*, 1937 CAB 58/200.

Tropical Africa represent probably less than 20 per cent of the number of children who should be in school,” and Johnson confirmed that this estimate sounded accurate. Even though attendance in the schools was low relative to total population, the medical and sanitation officer still believed the schools were the best avenue for transmitting knowledge about good nutrition. The committee member pressed on, saying, “So...we are only at the very beginning, even from that point of view,” which Johnson again confirmed. He pointed out, however, that “the elementary schools are increasing in number” but acknowledged that there was still a high percentage of children who did not attend school at all. The low but increasing attendance made it clear that the project of ending malnutrition through education was in its early stages. Johnson’s emphasis on education revealed to the CNCE that the project was nevertheless one of the most important strategies for fighting colonial malnutrition.⁴⁶

As for the “consequences” of ending malnutrition, one CNCE member brought up the dreaded specter of Malthus and his concerns of overcorrecting under-population into overpopulation in Africa. He asked “would the decrease in mortality lead to an enormous increase in population so that increase in agricultural output would not be sufficient, or would the general improvement of economic conditions which you are contemplating lead to some sort of improvement in the population?” Johnson answered, “I do not know. I think the population problem might crop up.” While it was unclear whether or not his

⁴⁶ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Notes of Sir Walter Johnson, Medical and Sanitary Services, Nigeria, to Committee*, 1937 CAB 58/200.

agricultural pun was intended, Johnson acknowledged that he believed overpopulation to the point of economic instability was an actual possibility in Nigeria.⁴⁷

In Gambia, the response to Thomas's despatch consisted of a report from the Medical Officer and a report created from the combined efforts of various government departments, including agriculture and education. The reports were officially sent from the Governor's Deputy, which had been approved by the Governor before being sent to the CNCE.

On the subject of education, the deputy report explained the current state of education and the future plans for expanding education in the Protectorate. The report began by explaining the gap between government and mission schools. Only the lone Government boarding school explicitly taught nutrition education. The next best attempt Gambian schools could boast of was the home-making lessons taught to elementary school girls in mission schools. While this education was not explicitly scientific in nature, there was at least an attempt to teach the children how to cook proper meals. As the deputy report stated, "in the Girls' Schools conducted by the Mission bodies domestic science is taught but the scientific value of foods has hitherto not formed part of the curriculum. Indeed it is doubtful if the pupils, who are for the most part very young, would understand such instruction except through the medium of practical lessons in the preparation and cooking of food such as are given in some, but unfortunately not all, of the schools." Even the schools that did teach lessons about food were not underpinning those lessons with the new hard science of nutrition. Here, the deputy report tapped into a

⁴⁷ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Notes of Sir Walter Johnson, Medical and Sanitary Services, Nigeria, to Committee*, 1937 CAB 58/200.

larger colonial concern for whether or not African school girls could even understand science lessons.⁴⁸

The report simultaneously saw nutrition education as helpful and unhelpful. On the one hand, its regret that nutrition education was so sparse held up nutrition education as an important aspect of the fight against malnutrition that Gambia needed more of. On the other hand, the report also cast doubt on its usefulness, fearing that it would be too complicated for students to even understand. Ultimately, the deputy report recommended a compromise: increasing a simplified curriculum of nutrition education. It stated that in the future, “the Educational authorities will bring to the notice of Missionary and other bodies engaged in teaching the prime importance of including in the instruction imported under the heading of hygiene the elementary principles of a balanced diet...” While there was not much money in the education budget, the Education Department would at least encourage all schools, government and mission-run, to incorporate basic nutrition into their already-existing lessons on the broader subject of hygiene.⁴⁹

Beyond the colonial classroom, additional initiatives into colonial education served as “practical measures” for improving nutrition. There were other ways for spreading nutrition knowledge. For example, the deputy report praised the maternity and infant welfare clinics for teaching the basics of good nutrition to the mothers who came to them. The deputy report also described plans to introduce “health weeks and baby

⁴⁸ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

⁴⁹ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

weeks,” festivals that modeled and celebrated the western principles of healthy living as a way of encouraging native Africans to follow them.⁵⁰

Similarly, even the Medical Officer’s “practical measures” came back to the necessity of education. Namely, he wanted Gambians to eat more eggs and drink more milk as a way of rounding out an imbalanced diet that did not contain enough protein. According to the Medical Officer, it was important to encourage Gambians to drink more milk, and “with this comes the education of the people in its general use.” Like encouraging Gambians to drink milk, the Medical Officer also wanted to encourage them to eat more eggs, but “this again entails long and patient teaching.” Coming out of a common frustration over native Africans’ “conservative tastes,”⁵¹ the Medical Officer knew that any measure intended to permanently alter Gambians’ daily lives would require extensive education measures.⁵²

Additional solutions proposed by the Medical Officer alongside education included growing more rice, implementing more pest control, encouraging Gambians to eat cattle in addition to trading them, and conducting more research on native diet. The deputy report, however, contradicted the call for further scientific research in Gambia. While the deputy report encouraged nutrition science research elsewhere, his Protectorate could not afford it. He did assert that the agricultural department would continue

⁵⁰ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

⁵¹ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

⁵² Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

experimenting with different kinds of crops to add variety to native diets and efficiency to Gambian farming methods.⁵³

As for the “consequences” of improved nutrition in Gambia, the deputy report acknowledged that shifting financial and agricultural priorities away from a narrow focus on growing the cash crop of groundnuts would mean that the Gambian economy would take a hit early on in the process of reducing malnutrition. He hoped, however, that in the long run, improved nutrition would lead to improved levels of production and recovered levels of profit. The deputy report explained how,

“Regarding the ‘consequences which improvements in nutrition’ might have upon the economy of the Gambia there can be no doubt that any increased cultivation of foodstuffs at the expense of the cultivation of groundnuts would in its early stages have an adverse effect on the money-wealth of the people and would reduce the revenue of the Colony owing to a reduction in the quantity of groundnuts exported. It is hoped, however, that this would be offset by an improvement in the health of the people, leading in time to increased strength and activity which might induce the farmers to throw off their lethargy and to cultivate both more extensively and more intensively than they do at present.”

Wanting to strike a good balance between prioritizing the cash crop and improving the health of Gambians, the deputy report insisted that “Government policy in this connection is, and must be, directed to a simultaneous increase in the production of both foodstuffs and money-crops.” Ideally, investing in imports and farming of a variety of foods would hopefully lead to more balanced diets for Gambians, and a continued emphasis on cultivating cash crops would ensure a continued revenue stream for producers.⁵⁴

⁵³ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

⁵⁴ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

Aware of the financial concerns of the colonial government, the Medical Officer framed his conclusions in terms a colonial governor would find appealing. He explained how “the present attitude of the farmer is one of mental lethargy due to various causes of which an unbalanced dietary is one; the vast prevalence of worm disease another. If these be put right it is safe to say that this lethargy will in great part disappear—with a consequent all-round speeding up of production.” Emphasizing the gains from which the colonial government could benefit with improved native nutrition, the Medical Officer hoped to be as persuasive as possible. Reassuring the Governor and the CNCE that production, and thus profits, would go up if the quality of native nutrition went up, the Medical Officer spoke in terms that colonial administrators would understand most clearly and to which they would be most receptive.⁵⁵

Unlike the previous two responses, the Somaliland report was one of the few responses that did not see education as one of the feasible “practical measures” to improve nutrition. Created by an entire committee specially tasked with responding to Thomas’s despatch, the responses were thorough. Citing the relatively recent acquisition of Somaliland from Italy, the report explained that the small colony had had very little time or resources to create the infrastructure necessary to study or improve nutrition. Somaliland was an extreme example of the conditions outside of West Africa, which generally had older, more established, and better-funded education than the rest of the continent.⁵⁶

⁵⁵ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199.

⁵⁶ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/200.

While education was still one of the goals of Somaliland, lack of available funds for schooling continued to be a major obstacle. Because of the lackluster, underfunded school system, nutrition education had made almost no headway in Somaliland. The report bluntly owned up to the fact that “no spectacular statement can be expected of Somaliland on the subject of practical measures for the improvement of nutrition which have been calculated directly to reach the population as a whole. The process of gradual insinuation of modern ideas has, nevertheless, been going on. There have been no schools where even the most elementary principles of scientific feeding could be taught, and indeed it will be many years before it will be possible to reach any appreciable proportion of the total population in that way.” Because the project of expanding education was even more demanding and costly in Somaliland than in more established and more lucrative colonies, spreading nutrition education via schools did not appear to be a worthy pursuit, according to the report.⁵⁷

Rather than formal education, the report contended that African elites setting a good example was one of the best chances the colony had of improving nutrition. The report explained that

“On the other hand the indirect method of keeping a careful watch on the diets of government servants and other classes who are under direct supervision has been fully exploited... There can be no doubt that this has had a real effect on the younger generation... and it is to be hoped that the desire for greater variation and for a regular regime once inculcated will not be lost in them but rather, as its advantages are more clearly realized, that it will spread to their less fortunate kinsmen whose life is with the flocks and herds.”

⁵⁷ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/200.

The report hoped that, if education through the school system was too far off to be a concrete solution, then good habits would trickle down from urban, middle-class Africans to the rest of the population. The report seemed optimistic that given enough time, elite Africans, with the money to buy groceries and the markets to give them the best opportunities for a mixed diet, could inspire poor rural Africans to mimic their diet.⁵⁸

As usual, the report discussed education as one of a number of efforts or possibilities for tackling malnutrition. In Somaliland, the report listed building new wells and persuading native farmers to rotate the fields where they let their stock graze as current undertakings. The report floated the distribution of free seeds as a potential future endeavor.⁵⁹

Even though education was handled differently, familiar tensions cropped up in the Somaliland report. As for the “consequences” of improving colonial nutrition, the report explained that since Somaliland’s economy was not based on enterprises that required considerable manual labor, such as mines, improving nutrition would not improve their production levels and revenue. According to the report, “an increase in population may follow from this improved nutrition in general, and maternity and child welfare work in particular, but it should be noted that the Somali is in the main a consumer and for that reason additional population cannot be of economic value beyond a point where the national income can support a more or less fixed population.” Instead, the report recommended making conditions more favorable to consumers rather than

⁵⁸ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/200.

⁵⁹ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/200.

producers, since most Somalis were primarily consumers in the view of the report. The idea was twofold: to make imports more affordable and to make Somali resources, namely cattle and milk, more affordable and more widely available to the Somali population so that internal trade was more balanced.⁶⁰

The governor had a different idea. In his commentary on the report, he explained that “I am opposed to allowing vegetables to be imported free of duty and to the removal or reduction of existing market dues on grain since, in my opinion, no useful purpose would be served by doing so.” He asserted that “I am convinced that not one gallon of milk is thrown away in this Protectorate and therefore it is clear to me that the Committee are wrong” about milk distribution. He was, however, “prepared to give [their solutions] a trial” if the CNCE thought that they could help make extra funds available to do so. The economic solutions recommended by the survey committee had clearly touched a nerve for the governor.⁶¹

Ormsby Gore wrote a frustrated reply to the Governor, stating,

I would be interested to learn why, in your view... reduction of the duties on vegetables would serve no useful purpose, particularly in view of...the Committee’s report in regard to the increasing consumption of vegetables by the Somalis and to the fact that an increase in the supply of vegetables is the one immediate change which could with advantage be made in the ordinary Somali diet.⁶²

His frustration revealed the disconnect between more humanitarian perspectives in London and the more economic-minded view on the ground in colonial Africa.

⁶⁰ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/201.

⁶¹ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/201.

⁶² Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Somaliland*, 1937, CAB 58/201.

Ormsby Gore latched onto the fact that, per the official Somaliland report, reducing the cost of vegetables led to an improvement in native diet. The Governor, by contrast, fixated on the loss of profit to the degree that seeing improved native diets did not even register as “useful” in his eyes.

These responses to Thomas’s despatch constituted part of an ongoing dialogue between the CNCE and colonial governments on the subject of native malnutrition and ways to end it. Colonial African governments’ responses varied both between and among each other in their views on the severity of malnutrition, solutions to end it, and what the colony might look like if they did. Colonial African governments’ clear hesitation to lower import taxes and increase the production of crops other than cash crops indicated a desire to pursue other directions for improving malnutrition than tinkering with the economy.⁶³ At the same time, education appeared in most responses as a laudable and attainable “practical measure” that colonies could take to improve nutrition. The CNCE Draft Report of 1938 reflected these trends, citing the twin culprits of poverty and ignorance, but ultimately choosing to target ignorance. As a result, the report glossed over an increased emphasis on mixed farming as a solution and instead focused on native education. While the reports had asserted that cash-crop farming contributed significantly to the problem of malnutrition, circular responses increasingly made it clear that altering the colonial economy was off the table as a solution to try. Not only would maintaining cash-crop farming preserve colonial governments’ profits, but it also promised to keep food prices low for malnourished working-class people in metropolitan Britain. Without

⁶³ Sierra Leone stands out as an exception where tariffs were reduced on nutritious food. Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Sierra Leone*, 1937, CAB 58/201.

reducing import taxes or cash crop production, changing education was the next best direction in which to move, according to the CNCE. Much of the education described, from maternity and infant welfare clinics to domestic science classes, implicitly referred to African women's education in particular.⁶⁴

The Blacklock Report

While colonial governors had economic reasons for seeing education as one of the clearest means of improving nutrition, public health officials and medical practitioners had their own reasons for advocating in favor of increased education, especially for women. Secretary of State for the Colonies Thomas, as well as colonial medical officers writing to the CNCE, had already popularized the notion of women's education, especially through maternity and infant welfare clinics. Dr. Mary Blacklock, from the Liverpool School of Tropical Medicine, the Women's Medical Service for India, and the Colonial Medical Service for Africa, also argued strongly in favor of women's and girls' education in both formal and informal settings. From her perspective as a female doctor treating female patients in the empire, she saw women's public health as a neglected field in need of state attention and believed that state-funded female education in nutrition would go a long way towards improving public health overall. Informed by and working within networks of medical practitioners through both publications and international conferences such as the Pan-African Medical Research Conference, Blacklock brought the public health arguments in favor of female nutrition education to the intersection of medical and political discourses of colonial nutrition.⁶⁵

⁶⁴ Worboys, "The Discovery of Malnutrition," 220.

⁶⁵ Tilley, *Africa*, 210; Hodge, *Triumph of the Expert*, 189-90.

Blacklock's article, "Certain Aspects of the Welfare of Women and Children in the Colonies," became one of the most influential texts on colonial women's health and nutrition. Originally published in the *Annals of Tropical Medicine and Parasitology* and sent to the CNCE in 1937, it was finally reprinted for discussion in the Subcommittee in 1939. While the article broadly addressed the entire colonial empire, Blacklock drew on her experiences working in Africa, and included specific examples from African colonies, making her article central to the debates on African colonial education.

Her impassioned article shook up the debates over the status and well-being of colonial women, including the impact of colonial malnutrition on them. She grabbed the colonial malnutrition narrative and took control of it, bending it towards a focus on female colonial welfare. Once the article came out, education and medical committees rushed to respond to it, collecting their own data after taking in Blacklock's reminder that public health policy generally, and malnutrition policy specifically, required taking colonial women into consideration in particular ways. Blacklock's confident assertions about the education of women provided a sense of direction and certainty for committees overwhelmed by the mountains of data prompting them in all different directions.⁶⁶

"Certain Aspects" provided an overview of the current state of colonial women's health, a strident defense of the improvement of their health, and suggestions for how to accomplish it. Blacklock specifically identified malnutrition as a major public health concern for colonial women. She drew an explicit link between maternal mortality and nutritional deficiency, namely in the form of anemia. She asserted that prevention was the best strategy, which included improved hygiene but "above all seeing that the women

⁶⁶ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

obtained an adequate diet.” Good nutrition not only prevented diseases like anemia that were a direct result of poor nutrition, but also indirectly prevented other diseases by strengthening resistance to them. The previous neglect of colonial women’s nutrition had deleterious effects on the overall African colonial population and on public health. The best solution to this neglect, Blacklock argued, was a renewed focus on improving women’s nutrition.⁶⁷

The article began with an analysis of the neglect of colonial women and girls, linking overall levels of colonial welfare to female welfare, as well as linking female welfare to both education and medical care. She described how

the early activities in the development of most colonies were chiefly the concern of men... As a result of this, the first schools which were built were for the education of boys, the hospitals were engaged chiefly in treating men patients, and in some cases... even the housing accommodation was sometimes for the use of male labourers alone. In districts where missionaries were working conditions were frequently better, as the women missionaries in educational and medical work among the women and girls... the advent of women doctors, health visitors, and nursing sisters, together with an improved curriculum in girls’ schools, has caused improvement in [colonial health conditions]—an improvement, however, which still has far to go.⁶⁸

According to Blacklock, improving women’s health would lift up overall levels of colonial health, since women were the ones caring for their families. The education of women and girls needed “particular attention” when it came to public health, because “in order to keep a home and care for a family in a healthy manner, women require a special type of education... were the women given the knowledge and opportunity to keep a healthy home and family, the good effects would naturally be felt also by the men and so

⁶⁷ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

⁶⁸ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

by the whole community.” A specialized education, tailored to women’s needs as wives and mothers, was the targeted solution to the problem of colonial malnutrition as identified by Blacklock. Women needed both medical care and education, and the women working in medical care needed education to get there. Training more female health workers, according to Blacklock, would raise the standard of women’s health, and healthy women armed with the knowledge of good nutrition and household budgeting imparted by domestic science classes would improve the health of their husbands and children.⁶⁹

Blacklock called specifically for state, rather than mission, education. She saw public health and women’s education as state issues that required state solutions. Placing responsibility for fixing female colonial malnutrition firmly in the hands of colonial government, she argued that “the State has a definite duty towards every child which it has allowed to be born within its boundaries, and that, in the words of the Declaration of Geneva, ‘the child must be given the means requisite for its normal development.’”⁷⁰ This exhortation echoed similar recommendations made by the CNCE findings that good nutrition should be the priority of colonial government over profit and that good colonial nutrition policy encouraged tariffs that made nutritious food affordable. For women’s education to be effective, women needed to have access to the nutritious foods they learned about in domestic science class. It would take the combination of economic and agricultural policies alongside education reform to improve colonial nutrition and health. While Blacklock’s priority was state-funded education and professional training for

⁶⁹ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

⁷⁰ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

women, she pointed out that the state had more work to do beyond education in order to improve colonial malnutrition.

Strikingly, Blacklock located poverty as one of the chief causes of colonial women's malnutrition, and once again called on the state to improve the economy as well as women's education. She described how "the health of women and, even more, the health of small children depends very much on economic conditions, and much of the sickness seen at welfare clinics, both among mothers and children, can be attributed solely to poverty. I have heard a health sister beg to be excused from visiting among a particularly poor section of a people, because she felt it was ironical to talk of a balanced diet to people who had practically nothing to eat but rice..." This anecdote stood out as one of the few times that Blacklock admitted the limits of colonial women's domestic science education. Acknowledging that education on good nutrition alone was pointless without the means to obtain adequate food, Blacklock hinted at larger structural problems at work. She wryly stated, "one wonders if colonial governments are active enough in trying to render conditions more equal. Is [narrowing the wealth gap between classes] indeed beyond the capabilities of the local financial authorities?" After this dry aside, she returned to her arguments in support of education without engaging any further on the role of the colonial economy. If education were pointless without improved access to food at the market, improved access to nutritious food could not be maximized without nutrition education backing women's food choices.⁷¹

For Blacklock, women's health was inextricably linked to their level of nutrition and their education. To improve women's health, Blacklock urged, the logical step was to

⁷¹ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

improve their nutrition by improving education. Only when female educators trained female health workers and homemakers would women's health, and thus overall health, truly improve in the colonies.

Blacklock's strongly-worded article spread from its initial journal of publication all the way to the Colonial Office, out to colonial governments, and ended up as a central document in the formation and plans of the Subcommittee on the Education and Welfare of Women and Girls. She demonstrated through both her extensive experience and vocal passion that prioritizing women's domestic science education would improve colonial malnutrition and public health more generally. Her heavy condemnation of the colonial neglect of women's health and education, combined with her clear call on the state to improve them, pressured colonial officials to respond quickly. Ultimately, Blacklock drafted public health and education policy proposals that could not be ignored by the colonial state.

The Esdaile Memo

Despatched only three months after Blacklock's article, Dr. Philippa Esdaile's 1936 "Memorandum on the Teaching of Domestic Science in England and Its Application in the Colonies" reached the desks of African colonial governments in April of 1937.

Esdaile, a reader at the King's College of Household and Social Science of the University of London and member of both the CNCE and the ACEC, stood out as one of the most prominent voices in the debate over African women's education. Endorsed by the ACEC as well as the Colonial Medical Advisory Committee and circulated to the colonies, her

memorandum drew explicit links between domestic science education and its ability to ameliorate colonial malnutrition.⁷²

While Blacklock's work as a medical doctor in the colonies led her to view women's education as a means of improving public health, Esdaile came from a different background and viewed the issue through a different lens. As a reader in Biology in London, Esdaile's chief concern was putting white female domestic science graduates to work in the colonies. She saw the circumstances as a *quid pro quo*: the colonial empire needed domestic science teachers, and metropolitan domestic science graduates needed employment. In the metropole, domestic science programs offered more degrees with more prestigious credentials than ever by the late 1930s. These programs promised to offer employment opportunities for female graduates "both in this country and in the Colonies," although jobs in the empire continued to be poorly advertised.⁷³ With growing numbers of domestic science graduates in the metropole and a growing need for more domestic science teachers in the colonies, Esdaile saw a clear solution to the issue. Specifically, she argued, mothers in the colonial empire needed help, and British women had just the special training to help them. Since both Blacklock and Esdaile approached the same problem but from different angles, the Colonial Office and the ACEC Subcommittee read them together as two sides of the same coin, one focusing on the students, the other on teachers.⁷⁴

⁷² Philippa Esdaile, *Memorandum on the Teaching of Domestic Science in England and its application to work in the Colonies*, 1936 CO 323/1415/3.

⁷³ Berridge House Prospectus 1931-38 LMA, ACC/ 900.

⁷⁴ Shortly after writing the article, Esdaile would serve on the Commission on Higher Education in East Africa, which was created by Ormsby Gore in 1936 and chaired by de la Warr, who also served as the chair of the CNCE. Mngomezulu, *Politics and Higher Education in East Africa* (Bloemfontein: African Sun Media, 2012); Hodge, *Triumph of the Expert*, 191.

Esdaile began by lauding the advances in nutrition science in the metropole and linking them to the betterment of British homes. Since British homes in particular benefited from developments in nutrition science, Esdaile concluded that British women needed particular instruction in the way that the latest research improved British housework and child-rearing. She described how “At the very center of the British Empire, therefore, it has been found necessary to provide special training in Domestic Science to girls and women, and experts in Biochemistry, Physiology, and Dietetics are doing all in their power to study the problem of nutrition and to bring the valuable results of their researches to every household. It is earnestly hoped that the Colonial Office and all our Colonial Governors will redouble their efforts on similar lines in the Colonial Empire.” Seeing how enriched British housewives were with the latest scientific discoveries applied to their homes, Esdaile believed that homemakers across the British Empire deserved the same training to attain the same benefits of the application of science to the domestic sphere.⁷⁵

Like Blacklock, Esdaile linked the overall health of the colonial empire both to women’s education and to improved nutrition. She asserted that “there would be fewer sick if by education, which should lay stress on domestic subjects and hygiene, the woman was enabled to do her work of home-building really well.” Women’s domestic science education began improving the health of the colonial empire in the home. Women were at the heart of the family, and family was the basic building-block of colonial society. Equipping colonial wives and mothers with domestic science knowledge would

⁷⁵ Esdaile, *Memorandum on the Teaching of Domestic Science in England and its application to work in the Colonies*, 1936 CO 323/1415/3.

bring about the overall improvement of colonial health one woman, one family, at a time.

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The domestic science program at King's College not only broadly prepared its graduates to be domestic science teachers, but specifically as dieticians as well. Esdaile saw the utility of sending both domestic science teachers and domestic science-trained scientists into the colonial empire. She argued that "Some of our expert dieticians should be employed in our Colonies.... fighting malnutrition and the diseases it brings, each helping to raise the power of resistance of the people." As a member of both the CNCE and the ACEC, she identified the improvement of nutrition as one of the most pressing problems in need of being addressed, and located the solution in education, especially women's education. She explained how "there are women trained in Domestic Science in the Mother Country who can help the Colonies just where that help is most needed. They can help the women of the Colonies to take their full share in building up, upon the only sure foundation, the welfare of their country." Esdaile placed malnutrition at the center of the problems of the colonial empire, and placed women at the center of the solution. Educated wives and mothers would ensure nourished, healthy families, and healthy families would raise the overall welfare of the colonial empire. Even her choice of terminology with the phrase "Mother Country" reinforced her message on multiple levels. The language of motherhood conveyed both the importance of mothers and women to the project of ending colonial malnutrition and also the notion that doing so

⁷⁶ Esdaile, *Memorandum on the Teaching of Domestic Science in England and its application to work in the Colonies*, 1936 CO 323/1415/3.

was white women's burden—the maternalistic counterpart to the paternalism of the colonial empire.⁷⁷

Esdaile concluded with two recommendations for improving domestic science education in the colonies. First, she asked local authorities to increase the place and role of domestic science, especially dietetics, in native education curricula, and to staff schools with a greater number of qualified teachers from England. She stated that “the Colonies should increase their efforts to meet the urgent need for additional expenditure on a thoroughly well qualified staff of Domestic Science teachers... no amount of money spent on health services can compensate for the initial loss of health by ignorance...” Like Blacklock, Esdaile urged colonial governments to make women's domestic science education a priority and reflect that value through their budgets. Unlike Blacklock, Esdaile elided the issue of colonial poverty to focus instead on African mothers' lack of knowledge of proper food hygiene and child feeding. To persuade the ACEC and the Secretary of State for the Colonies of the importance of her mission, Esdaile set up African women's ignorance as the problem so that British domestic science teachers would serve as the solution.⁷⁸

Second, and also in service of white female students in Britain, Esdaile suggested creating more publicity for colonial domestic science jobs to generate more interest and draw more qualified women to the posts. Her vision that “the enthusiastic student studying for a degree in household and social science would then have before her a well-

⁷⁷ Esdaile, *Memorandum on the Teaching of Domestic Science in England and its application to work in the Colonies*, 1936 CO 323/1415/3.

⁷⁸ Esdaile, *Memorandum on the Teaching of Domestic Science in England and its application to work in the Colonies*, 1936 CO 323/1415/3.

defined outline of a possible career” reinforced her point that for domestic science programs in Britain to be more robust and successful, they needed to be in closer partnership with the colonies. Colonial posts needed to be clearly and attractively advertised to all domestic science students. In a related point, Esdaile also recommended increasing the cooperation between English domestic science schools and colonial science and medicine to keep curricula updated with cutting-edge colonial knowledge of tropical hygiene as well as tropical foods and their preparation. Esdaile wanted to demystify work in the colonies as part of her bid to expand white professional women’s work opportunities. Under the banner of white female professionalization, Esdaile had found another reason to put African women’s domestic science education at the center of the problem of malnutrition.⁷⁹

The Domestic Science Survey

Finally, Esdaile’s memo prompted Ormsby Gore to send out a circular despatch inquiring about the state of domestic science education in colonial Africa in 1937. The colonial administration, medical officers, and education specialists overlapped on the idea that domestic science education would be one of the top solutions to the problem of African colonial malnutrition, and altering the colonial economy had been taken off the table. From Ormsby Gore’s perspective, then, the next step was to evaluate the current status of domestic science education and potential for further growth and improvements. In April of 1937, on the heels of Esdaile’s memo, Ormsby Gore’s circular on Domestic Science in the Colonies was the culmination of these CNCE surveys, articles, and

⁷⁹ Esdaile, *Memorandum on the Teaching of Domestic Science in England and its application to work in the Colonies*, 1936 CO 323/1415/3.

memoranda that preceded it in the mid-to-late 1930s. As Ormsby Gore explained in the introduction to his despatch,

I have the honor to transmit to you a copy of a memorandum by Dr. Philippa Esdaile regarding the teaching of domestic science in England and its application to work in the colonies. In this connection I would invite reference to my despatch on the 22nd of January last transmitting copies of a pamphlet by Dr. Mary Blacklock on “Certain Aspects of the Welfare of Women and Children in the Colonies” and also to Mr. Thomas’s circular despatch of the 18th April, 1936, and my circular despatch of the 11th November, 1936, on the subject of nutrition.⁸⁰

Thus, Ormsby Gore himself mapped the intersection of the global and colonial networks promoting the idea that domestic science education could help improve colonial malnutrition in his explanation of why he wanted an overview of domestic science education. In retrospect, he could see how the myriad surveys and memoranda on colonial nutrition had funneled into a focus on female education in domestic science. He called colonial governments’ attention to this trajectory so that they too could place the domestic science survey into the broader context of the attempt to address colonial malnutrition.

The circular asked colonial governments for information on domestic science in the colonies to respond to Esdaile’s memorandum. As an abstract of the replies described, “the despatch asked for: a) Statement of the various posts now provided for the teaching of domestic science, b) Information as to the number of these posts which are of a kind ordinarily filled by recruitment from the United Kingdom, and enquired whether c) any expansion in domestic science teaching was to be expected (involving an increase in posts to be filled from United Kingdom).” Ormsby Gore wanted to understand the current

⁸⁰ Subcommittee on the Education and Welfare of Women and Girls, Appendix I, 1937 CO 859/1/9.

lay of the land before making any decisions about how to move forward with the plan of expanding domestic science education.⁸¹

The responses from colonial governments varied considerably, both across the empire generally and across Africa specifically. They often echoed one another in both their desire to expand domestic science education and their financial struggle to actually do so. Unsurprisingly, the state of domestic science education varied from colony to colony, ranging from a total lack of a program to an existing program looking to grow. For example, the bleakest response came from Bechuanaland, a small colonial territory within the Dominion of South Africa. In their response to question “c” on whether “any expansion in domestic science teaching was to be expected,” the colonial government of Bechuanaland replied: “None: general standard of education too low for a specialized structure.” Other colonial governments had a better estimation of their students but not of their education budgets. For example, Tanganyika’s colonial government had similar concerns about its own students but also concerns about the budget. Their response claimed that the “number of posts in future would depend on general progress of education among African girls and women, and also on availability of funds.” Even if their students passed muster, additional funds would be necessary to keep up with their advancement.⁸²

Other colonies shared similar financial concerns. For Gambia, their entire response was that domestic science education expansion was “unlikely for financial reasons.” Similarly, the Kenyan colonial government explained how “additional Government posts

⁸¹ Subcommittee on the Education and Welfare of Women and Girls, Appendix I, 1937 CO 859/1/9.

⁸² *Replies to Ormsby Gore’s April 1937 Circular* CO 859/1/9.

[were] unlikely, in absence of Government establishments for education of African girls.” Government subsidies toward colonial education played an important role across Africa, and Kenya in particular drew attention to it in their evaluation of their domestic science program. While the Kenyan reply explained the two most important factors in the expansion of their program, Sierra Leone was much less detailed, if equally uncertain. Without further explanation, the response from the colonial government of Sierra Leone merely stated, “little expansion likely.” Especially for financial reasons, domestic science programs across Africa appeared meager and without much potential.⁸³

Other colonial governments were more optimistic. In Nyasaland, “provision for further training of departmental staff for development of subject [was] under consideration.” Similarly, the West African state of education tended to be much more well-established and well-funded. In Gold Coast, “expansion [was] recommended by Director of Education,” and in Nigeria “expansion [was] recommended by Director and under consideration.” Generally but not always restricted to West Africa, other colonial education systems independently considered expanding their domestic science programs.

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Colonial African governors and school officials supported the idea that domestic science inhabited a crucial place in African education, especially “in relation to questions of nutrition,” but for most, there was little or no money in the budget to expand it. Furthermore, colonies that had small programs were the most likely to respond that they did not have plans to or could not expand further. On the other hand, colonies that already

⁸³ *Replies to Ormsby Gore's April 1937 Circular CO 859/1/9.*

⁸⁴ *Replies to Ormsby Gore's April 1937 Circular CO 859/1/9.*

had fairly robust programs by spring of 1937 were more likely to respond that they were interested in growing the program even more. For example, Gambia and Sierra Leone, whose governments had each communicated the unlikelihood of expanding their programs, both listed that they currently had one post for a qualified domestic science teacher recruited from the United Kingdom. By contrast, Gold Coast and Nigeria, whose governments each sounded optimistic about expanding their programs, had sixteen and thirty posts, respectively, for qualified domestic science teachers.⁸⁵

These findings were significant but also empty and somewhat misleading. While on the one hand they illustrated an empire-wide dialogue about domestic science education as one of the best means of attacking malnutrition, the desire to expand domestic science education was virtually meaningless without a commitment or funding to follow through on the recommendations. Additionally, the design of the survey created considerable limits: the survey only asked about government positions for British teachers who possessed a domestic science degree. This metric left out a broad and far-flung network of other kinds of domestic science teachers. British teachers without degrees, usually missionaries funded by a state subsidy, made up a notable proportion of domestic science teachers. Even though their work would not be possible without government assistance, they were sometimes invisible to the state itself, as this survey illustrated. However, the Kenyan reply to the circular did choose to mention other types of domestic science teachers than the ones specifically inquired about, which provided clues as to the shape of domestic science education outside of the strict bounds Ormsby Gore had created. The Kenyan reply stated that even though Kenya had no domestic science teachers in state

⁸⁵ Esdaile, *Memorandum on the Teaching of Domestic Science*, 1936 CO 859/1/9.

schools for Africans, it did have twenty-six domestic science teachers at mission schools, although it admitted that their “qualifications would not in all cases be accepted” as equivalent to a degree from a British university. Since the colonial state so often harnessed the existing system of mission schools to bolster its own education plans, and since a considerable part of domestic science education was carried out by women without degrees, Ormsby Gore’s survey may have provided valuable information about the state of domestic science education, but it also had its limits.⁸⁶

Despite these limits, the Domestic Science Survey helped bring about an important turning point in colonial domestic science education: shifting attention specifically to Africa. Up to this point in 1937, nutrition and education surveys and articles broadly focused on the entire colonial empire, including but not limiting their analyses to examples from colonial Africa. Colonial government replies to the CNCE nutrition survey listed domestic science education, particularly for women, as a crucial accompaniment to various scientific advancements intended to reduce malnutrition. Blacklock and Esdaile drew special attention to the importance they placed on the education of wives and mothers across the colonial empire. Esdaile’s memo prompted the Colonial Office’s survey on the current state of domestic science education in the colonial empire to lay the foundation for future policy. Once these ideas arrived on the desk of the Colonial Office, colonial education officials packaged them together and sent them to the ACEC to devise a plan for creating a state policy on female colonial

⁸⁶ *Replies to Ormsby Gore’s April 1937 Circular*, 1937 CO 859/1/9.

education that would reduce malnutrition. The plan ultimately targeted Africa as the place to start prioritizing domestic science education.

Hanns Vischer and Arthur Mayhew, Joint-Secretaries of the ACEC, linked Esdaile's memo to Blacklock's and sent copies of both texts together to the ACEC in May of 1939, once they had received enough replies to the despatch on domestic science. The ACEC addressed these texts together as a single unit on domestic science education. Ultimately, they decided that at the next meeting, the "[ACEC] should have a preliminary talk" about Blacklock and Esdaile's memos, but then "eventually these questions should be referred to a subcommittee." Since the ACEC handled all aspects of colonial education, they knew they would need a special task force to focus specifically on women's domestic science education. Suspecting that even that subject would be too broad for a single subcommittee, one member "suggested that discussion in the first [meeting] should be limited to Africa," which Vischer agreed with. He cited recent research which suggested that women's education was a "pressing problem" across the African continent. Knowing that they needed to choose a strategic starting place for prioritizing women's domestic science education, the ACEC selected Africa due to Malthusian concerns over Africa's perceived low levels of population and high levels of malnutrition.⁸⁷

A few months later, the ACEC officially created their Subcommittee on the Education and Welfare of Women and Girls. The Subcommittee reviewed Blacklock's and Esdaile's memos, African colonial government responses from the domestic science circular, and African colonial government responses to the inquiries of the CNCE as they

⁸⁷ Advisory Committee on Education in the Colonies, *Meeting Minutes for May, 1939* CO 323/1415/3.

attempted to craft an education policy for African women and girls that would help end African colonial malnutrition. Echoing the evolution of the 1924 Advisory Committee on Native Education in British Tropical Africa into the broader ACEC, the Subcommittee devoted to studying Africa also sought to have broader, empire-wide applications.

In the first written statement put forth by the brand new ACEC Subcommittee, they explained that “we had intended that this report should deal only with Africa and that we should submit separate reports later in regard to other parts of the Colonial Empire.” The publication of the “Statement of Policy on Colonial Development and Welfare,” which meant that “Colonial Governments throughout the empire will now be preparing plans for the expansion of their services,” inclined the Subcommittee to put forth a more general “statement of principles and policy on female education” in their introduction. Essentially, the Subcommittee intended for their initial blanket statement on female education to be applicable both to Africa, their focus, and also to provide a template for subsequent studies of female education in the rest of the colonial empire. They saw their work on African female domestic science education as the standard-bearer for future work in the rest of the colonial empire. Their work on African domestic science education derived its significance, in part, its members believed, in leading the way forward for the rest of the empire. Working within the auspices of wider global and imperial networks, the Subcommittee crafted its policies with those networks in mind.⁸⁸

⁸⁸ Subcommittee on the Education and Welfare of Women and Girls, *Considerations of General Validity*, 1939 CO 859/1/9.

Conclusion

Ultimately, Ormsby Gore responded to a series of surveys and articles on the subject of colonial malnutrition. The question was not whether the state should have a hand in improving nutrition, but what its role should be. From transnational organizations such as the League of Nations to individuals like Blacklock to sub-imperial institutions such as the CNCE, perspectives on the problem of nutrition came from multiple disciplines, had different motivations, and envisioned different, sometimes competing solutions. The earliest calls for more information on the colonial empire began with global efforts from the League of Nations as an open-ended set of questions requesting descriptions of the current state of nutrition all around the world. Then, the British Colonial Office created its own committee to investigate the specific state of nutrition in the colonial empire. Colonial government responses leaned away from reducing taxes on food imports and allowing for more mixed farming at the expense of cash crop farming. As a result, they leaned toward education and other measures. Blacklock and Esdaile's decisive arguments in favor of women's education served as the tipping point for the Colonial Office to start moving in that direction. The ACEC Subcommittee for the Education of Women and Girls was ultimately the product of a global movement that aimed to improve nutrition, shaped by British colonial governments' preferences to preserve their taxes and by education and medical officials' preference to prioritize women's education. Cooperation between these institutions and fields of research may not have been very successful at the local level, but these multidisciplinary, international conversations represented a broad, overarching kind of cooperation which culminated in promoting African women's education as part of the project to improve nutrition. By the late 1930s, the British

colonial state had turned its eye to African women's nutrition education as an important solution to colonial malnutrition.

Chapter 2

Putting All of Their Eggs in One Basket: Creating a British-Nigerian Domestic Science Hybrid in the Southern Province

The Colonial Office and ACEC surveys continued collecting nutrition education data up through 1939. The domestic science classes they collected data on had originated much earlier and had continued to expand under increased state control since the 1920s. The classes' perceived success relative to other ways of spreading nutrition knowledge illustrates that they were the main vehicle for nutrition science education, despite low attendance records. As the state increasingly regulated domestic science examinations and credentials, nutrition education mediated the relationship between British and African women's relationship to each other as well as to the central and colonial states.

The state wanted domestic science teachers with domestic science degrees in Britain, even though domestic science classes and classrooms were significantly different in Africa than in Britain. Nevertheless, their British training was all that British teachers were able to bring with them into the African domestic science classroom. These experiences, facilities, exams, and diplomas—in short, this cultural world—was all that a British domestic science teacher carried with her when she went to teach in Africa. Colonial educators freely admitted that the British domestic science experience could never prepare British women for the realities of African kitchens and meals. The influence of the British education system and food culture, however, emerged clearly in African domestic science classrooms. For all their differences, significant similarities came through as well. British domestic science curriculum planners attempted both to take African needs and practices into account and to import what they considered the best

aspects of the British education system. These attempts created a syncretic domestic science program that was neither entirely British nor entirely African. In addition to British women teaching domestic science in colonial Africa, occasionally African women came to Britain to study domestic science. Both people and ideas about nutrition circulated to and from metropole and colony, rendering women's nutrition science education the product of a mixture of cultures and ideas. British teachers brought domestic science programs to Africa, but those programs changed on the ground as teachers responded to their students and environment, creating a uniquely British-Nigerian way of learning about nutrition science and cookery.

Domestic science classes in both Britain and Africa shared some significant similarities, despite glaring differences. For example, in other respects, domestic science sought to bring the latest scientific discoveries into the domestic realm. As the central and colonial states' roles expanded and it increasingly became the states' responsibility to promote hygiene and welfare, domestic science education came under greater state control. Finally, domestic science in both places served as both a project to advance middle-class women and a project to civilize working-class and African women.

Ultimately, this chapter seeks to make four main points. First, it illustrates the backgrounds of the creation of domestic science in both Britain and Africa by using two schools, Berridge House in London and Queen's College in Lagos as central examples. Domestic science in each region followed a similar trajectory—from Victorian mission roots to state-backed and science-focused programs. Second, the chapter looks at the physical facilities of domestic science schools in both places, arguing that the science of cooking was in a state of flux as technology evolved in this period, which required

domestic science teachers and students to possess a degree of flexibility and creativity that defied standardization. Third, the chapter compares the degrees and courses offered in both schools, arguing that domestic science classes functioned as both an attempt at paternalistic class and racial uplift and also as opportunities for women to socially advance. Finally, the chapter looks at domestic and colonial exams to argue that examination requirements reveal some of the starkest differences in education expectations between Britain and Africa.

The Broad Context

Interwar nutrition education through domestic science classes both in Britain and Africa emerged out of a long and broad context of using hygiene to promote working-class and racial uplift. Nineteenth-century British industrialization and urbanization introduced new questions and discoveries in the realm of sanitation and public health. Victorian health and hygiene took on moral and racial elements, as good hygiene consisted of healthy habits that supposedly made the practitioner civilized and modern. In other words, cleanliness was next to Godliness, and in the nineteenth century, cleanliness was also next to middle-class whiteness. In both Britain and the colonial empire, the state's responsibility to promote hygiene evolved and grew, expanding the role of the state in public health. Intimately bound up in domestic matters, promoting hygiene also expanded voluntary and professional roles for middle-class women in Britain and the empire. Whether volunteering at British or colonial maternal and infant welfare clinics, or working as home health inspectors, British middle-class women seized the opportunity to professionalize their patriarchally-assigned responsibility to be cleanliness experts. By

the 1930s, nutrition science emerged as a clear avenue for women to pursue careers that did not upset their supposedly natural roles as nurturers and caretakers.¹

In both Britain and the colonial empire, notions of class uplift contained a distinctly racial component. The uncivilized habits of the British poor threatened the strength of the British nation, a concept deeply embedded within white supremacy over the colonial empire. Building and maintaining national strength and efficiency through good health occupied politicians, medical professionals, and eugenicists from the late nineteenth into the twentieth centuries, particularly after both the Boer War and World War I revealed the poor health of the troops. Britain's belief in its own racial superiority not only meant bolstering the health of the white British population, but also led to a paternalistic feeling of responsibility for racial uplift in the colonial empire. White and African women alike took whatever opportunities they could glean from an expanding colonial state attempting to spread European hygiene norms. White women, as missionaries or as professionals, travelled to the colonial empire to teach and medically treat women and children. African women also did what they could to work within the

¹ For more information on these topics, see Phil Harling, *The Modern British State: An Historical Introduction* (Cambridge: Polity, 2001); Pat Thane, *Foundations of the Welfare State* (London: Routledge, 1996); Philippa Levine, *Prostitution, Race, and Politics: Policing Venereal Disease in the British Empire* (London: Routledge, 2003); Judith Walkowitz, *Prostitution and Victorian Society: Women, Class, and the State* (Cambridge: Cambridge University Press, 1982); Catherine Hall, *Civilizing Subjects: Metropole and Colony in the English Imagination 1830-1867* (Chicago: University of Chicago Press, 2002); John Darwin, *The Empire Project: The Rise and Fall of the British World-System 1830-1970* (Cambridge: Cambridge University Press, 2011); Seth Koven, *Slumming: Sexual and Social Politics in Victorian London* (Princeton: Princeton University Press, 2006); Lara Kriegel, *Grand Designs: Labor, Empire, and the Museum in Victorian Culture* (Durham: Duke University Press, 2008); Deborah Nord, *Walking the Victorian Streets: Women, Representation, and the City* (Ithaca: Cornell University Press, 1995); Anna Davin, "Imperialism and Motherhood" in Frederick Cooper and Ann Laura Stoler, eds., *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997); Anne McClintock, *Imperial Leather: Race, Gender, and Sexuality in the Colonial Contest* (London: Routledge, 1995); Margaret Strobel, *European Women and the Second British Empire* (Bloomington: Indiana University Press, 1991); Antoinette Burton, *Burdens of History: British Feminists, Indian Women, and Imperial Culture, 1865-1915* (Durham: University of North Carolina Press, 1994).

system, including taking advantage of access to western medicine and attending British schools to socially advance within the colonial system. By the 1930s, the nutrition science boom shaped these trends, with both British and African women earning degrees in domestic science to use the state's desire to spread nutrition knowledge to create professional opportunities for themselves. These women's interactions within the space of the colonial domestic science classroom produced a syncretic, or hybrid, set of domestic science practices neither entirely British nor African, as British teachers and African students cooperated or compromised to make the lessons happen.²

Victorian Domestic Science Background in Britain and Africa

Domestic science in both Britain and Africa had its roots in the late nineteenth century. Under the banner of numerous names, including “domestic subjects,” “home craft,” and “housecraft,” domestic science served as a catch-all that covered any number of skills including laundry, needlework, childcare, housewifery (tidying up), sometimes even basic first aid, and always, cookery. After the 1870 Elementary Education Act made

² For more information on these topics, see Alison Bashford, *Purity and Pollution: Gender, Embodiment, and Victorian Medicine* (Palgrave MacMillan, 1998); Richard Soloway, *Demography and Degeneration: Eugenics and the Declining Birth Rate in Twentieth-Century Britain* (Durham: University of North Carolina Press, 1995); G. R. Searle, *The Quest for National Efficiency: A Study in British Politics and Political Thought, 1899-1914* (Amherst: Prometheus Books, 1990); Deana Heath, *Purifying Empire: Obscenity and the Politics of Moral Regulation in Britain, India, and Australia* (Cambridge: Cambridge University Press, 2010); Vivien Bickford-Smith, *Victorian Pride and Ethnic Prejudice in Victorian Cape Town* (Cambridge: Cambridge University Press, 2003); Timothy Burke, *Lifebuoy Men, Lux Women: Commodification, Consumption, and Cleanliness in Modern Zimbabwe* (Durham: Duke University Press, 1996); Luise White, *Comforts of Home: Prostitution in Colonial Nairobi* (Chicago: Chicago University Press, 1990); Amy Kaler, *Running After Pills: Politics, Gender, and Contraception in Colonial Zimbabwe* (London: Heinemann, 2003); Belinda Bozzoli, *The Women of Phokeng: Consciousness, Life Strategy, and Migrancy in South Africa, 1900-1983* (London: Heinemann, 1991); Kristin Mann, *Marrying Well: Marriage, Status and Social Change Among the Educated Elite in Colonial Lagos* (Cambridge: Cambridge University Press, 1985); Nancy Hafkin and Edna Bay, eds. *Women in Africa: Studies in Social and Economic Change* (Stanford: Stanford University Press, 1976); Claire Robertson and Iris Berger, eds. *Women and Class in Africa* (New York: Africana Publishing Company, 1986); Homi Bhabha, *The Location of Culture* (London: Routledge, 1994).

elementary school compulsory for all children including girls, schoolgirls' increased attendance rates led to debates about what to teach them. In the 1870s, no one made the case that education should be the same for both boys and girls and thus, domestic subjects emerged as a clear solution for filling schoolgirls' days.³ Expanding the number of children in school, the Act also prompted the need for more training for more teachers, including domestic science teachers to meet the increased need for girls' education. The National Society for Promoting Religious Education stepped in to evaluate and address the need.⁴ The National Training School Of Cookery, founded in 1873, ultimately took over the responsibility for producing trained, credentialed female domestic science teachers. The National Training School became the National Training School of Cookery and Other Branches of Domestic Economy in 1902 and, in 1931 became The National Training College of Domestic Subjects.⁵

Domestic subjects became domestic science over the course of the last decades of the nineteenth century and first decade of the twentieth century, as part of broader attempts both to bring the latest scientific advancements into the home and to legitimize women's work. Cookery, as one of the most central subjects to domestic science, became one of the most important arenas for bringing science into the private sphere and for providing women with a nonthreatening, gender role-conforming way to practice science. Seeking to carve out acceptable ways for middle-class women to work outside the home, proponents of domestic subjects education made such work palatable to the state and

³ Dena Attar, *Wasting Girls' Time: History and Politics of Home Economics* (London: Virago Press, 1990); 36.

⁴ Graham Handley, *The College of All Saints 1964-1978: An Informal History of One Hundred Years, 1878-1978* (London: The College, 1978); 3.

⁵ Handley, *The College*, preface.

society more broadly by centering the work on traditional women's roles and home life. Teachers navigated the contrast between domesticity and working in the public sphere by striking a balance in the field of domestic subjects.⁶

In 1873, J. C. Buckmaster, from the Science and Art Department, South Kensington Museum, lauded the "application of scientific principles to cookery" in a series of lectures reported to be "far more entertaining than most plays going on these days."⁷ The late Victorian movement for domestic science occurred both within and alongside the women's movement for the professionalization of women's skills. Wanting more career opportunities for middle-class women, support for domestic science education emphasized working in elementary schools but also wanted to make sure that domestic life in England rested on the latest advancements in domestic science. Careers in domestic science also provided middle-class women with opportunities and credentials to become "domestic managers of institutions and canteens, demonstrators for food companies, and factory inspectors," but the emphasis remained predominantly on education.⁸

Agitation for and state interest in domestic science education had two sides to the coin: teaching the subject in schools served as both professional advancement for middle-class teachers and as a means of working-class uplift through girls' education for the next generation of homemakers.⁹ In the push for increased domestic science education,

⁶ Annmarie Turnbull, "An Isolated Missionary: the Domestic Subjects Teacher in England, 1870-1914," *Women's History Review* 3:1, 81-100; 82-3.

⁷ *Birmingham Weekly Post* 1 June 1873, cited in Turnbull, "An Isolated Missionary," 81.

⁸ Turnbull, "An Isolated Missionary," 82.

⁹ Anna Davin, "Mind That You Do As You Are Told: Reading Books for Board School Girls, 1870-1902," *Feminist Review* 3 (1979): 89-98.

proponents placed their emphasis on elementary schools because girls' education in domestic subjects also became a priority. Middle-class educators hoped that working-class uplift in the form of girls' domestic science education could improve the home lives of the laboring classes.¹⁰ Blaming the problems of the working class on ignorant wives and mothers, advocates of working-class uplift saw domestic subjects education as a clear means of inculcating civilized, middle-class norms and values in the unruly and unkempt poor. Increasing the number of domestic subjects classes also happened to create more job opportunities for the very middle-class women advocating for those classes. Middle-class women led the movement for more domestic science education from the bottom up, and the state, via the Education Department and the Board of Education, worked from the top down to expand domestic science programs.¹¹ By 1878, domestic subjects became compulsory in girls' elementary education.¹²

By 1913, domestic subjects had completed their evolution into domestic science, as evidenced by both a 1911 Interim Report on Housecraft in Girls' Secondary Schools and a 1913 Consultative Committee on Practical Work in Secondary Schools. Both reports urged an emphasis on the incorporation of science into domestic subjects generally, although this evolution was not without controversy. As Hilda Hartle, a teacher at a teachers' training college pointed out, "the science of cookery...is yet in its infancy. No literature of the subject exists. Not even the most brilliant organic chemist can be said to 'know' the chemistry of foods, still less can such a subject be within the grasp of

¹⁰ Marelene Rayner-Canham and Geoff Rayner-Canham, "The Rise and Fall of Domestic Chemistry in Higher Education in England During the Early Twentieth Century," *Bulletin for the History of Chemistry* 36 (2011), 35-42; 35.

¹¹ Turnbull, "An Isolated Missionary," 82.

¹² Attar, *Wasting Girls' Time*, 25.

students in training.”¹³ Nevertheless, by the first decade of the twentieth century, the chemistry of cooking lay at the center of the discussion.¹⁴ Domestic science teaching had not yet been standardized, and domestic subjects schools and teacher-training were different from that of other elementary school teachers. Rather than integrating the program into the broader field of elementary-school teaching, domestic science programs remained separate and distinct.¹⁵ Finally, by the 1920s and 30s, domestic science education underwent another evolution with the new knowledge of nutrition that Hartle’s comment called for. This knowledge reshaped British economic and scientific experts’, as well as British women’s, understandings of budgeting, grocery-shopping, and cooking.

African domestic science education, especially in West Africa, had a long history. The challenges of colonial rule resulted in a wide variety of forms of education for African girls and women that emerged in patchy and uneven ways across the continent. African girls learned how to cook by their observing their mothers, a system almost invisible and certainly irrelevant to the institution-minded British. Like British domestic science programs, African domestic science programs also had nineteenth-century mission roots. The British established the first girls’ school in Nigeria in the city of Lagos in 1869. It was intended to be an immersive education experience to “shape character” and make good Christians, similar to the same types of schools in England.¹⁶ Under Victorian missions, African girls’ education in domestic subjects such as needlework

¹³ H. J. Hartle, “Correspondence: Housecraft in Training Colleges,” *Journal of Education*, 1911, cited in Canham, “The Rise and Fall,” 35.

¹⁴ Canham, “The Rise and Fall,” 35.

¹⁵ Turnbull, “An Isolated Missionary,” 83.

¹⁶ LaRay Denzer, “Domestic Science Training in Colonial Yorubaland, Nigeria,” in Karen Tranberg Hansen, ed., *African Encounters with Domesticity* (New Brunswick: Rutgers University Press, 1992), 118.

served as a vehicle for British missionaries to teach virtues such as neatness, orderliness, and hard work.¹⁷ As the nineteenth century progressed, the lessons increasingly rested on emerging scientific knowledge. Into the twentieth century, the moral connection between domestic education and virtue persisted, with an additional underpinning of science as the new gospel of the civilizing mission.¹⁸

African domestic science was heavily influenced by British domestic science but even British educators understood that it could not be a cookie-cutter version on a different continent. For example, generally, British teachers conducted early education lessons in native African languages, only switching to English in intermediate-level classes. Like British domestic science, the African version also went by alternative names such as housewifery and housecraft, and consisted of blurred lines between a host of subjects that studied nutrition science, including maternal and infant welfare, hygiene, and cookery. While “domestic science” referred to a host of activities required in maintaining a home, including cleaning and needlework, food-related tasks comprised the bulk of its focus. Grocery budgeting, purchasing, selling, growing, storing, and preparing food took up much of the domestic science syllabus. Domestic science also frequently overlapped with another major area of African study, hygiene. The importance of clean water in cooking as well as washing one’s hands, food, and cooking utensils, all came under the purviews of both domestic science and hygiene. Essentially, existing classes and subjects that dealt with the topic of food were the best avenue for teaching nutrition. Colonial administrators and teachers often conflated cooking and nutrition. Dietetics

¹⁷ Denzer, “Domestic Science,” 118.

¹⁸ Adewunmi Fajana, *Education in Nigeria: An Historical Analysis* (London: Longman, 1978).

education, when specifically addressed in education reports, appeared consistently under the “cooking” heading. In the metropole as well as in Africa, the idea was to inject older lessons on cooking with the new principles of nutrition science—hence, domestic science. While this process was more streamlined and explicit in English cookery and domestic science schools, the process was less standardized and more covert in Africa.

The blurred lines between these categories came for two main reasons: the emphasis on a holistic approach to education, and the feeling that educators had to dumb down science to render it comprehensible to their African students. First, the holistic approach that underpinned colonial education policy resulted in a single subject broached from several colonial departments’ perspectives. The Agricultural Department, the Colonial Medical Service, and the Education Department contributed their input into nutrition education from different angles. Thus, the Agricultural Department advocated growing the most nutritious kinds of food in farming classes, the Medical Service emphasized the new scientific understanding of nutrition, and teachers gave cookery lessons using nutritious food. All of these different approaches came under the umbrella of domestic science, from farming to the principles of dietetics to meal preparation.

Second, the simplification and oversimplification of science education led to a variation in the degree to which teachers explicitly taught the science of nutrition. In some specific cases, such as in girls’ schools in Uganda, teachers reported an “active interest” in dietetics. More frequently, the science of nutrition underpinned domestic science lessons even if teachers did not overtly explain so.¹⁹ Rather, domestic science

¹⁹ “The Present Position in Africa,” ACEC Subcommittee, 1939. NA, CO 859/1/9.

teachers covertly slid the principles of dietetics into cooking lessons. For example, colonial nutritionists advocated for more eggs in the African diet. Domestic science teachers, in turn, encouraged African girls to cook and eat more eggs, with textbook suggestions like, “eggs are very valuable as food. If milk cannot be obtained easily, more eggs should be eaten... Eggs also have all the vitamins except vitamin c,” to emphasize their importance.²⁰

Part of the difficulty for colonial educationalists was the ad hoc and ambiguous nature of the bulk of African women’s education. As a population that was difficult for Europeans to reach and frequently low on the priority list, their education came in layers of formal and informal, both for teachers and for students. The formal education for African girls was mostly through primary and secondary education, with the majority of students in primary education, approximately for ages five through twelve. Lack of interest and funds meant that these schools were few and far between, and due to a variety of factors from lack of interest to lack of time, African girl students were few and far between as well. Formal education remained the ideal and ultimate goal of administrators and of a growing number of Africans, but for the vast majority of the African population, it was far from the standard, with some educators estimating that formal state education only reached one percent of the African population.

One common way that African women received education was by attending school with their husbands, usually teacher-training school. Colonial administrators supported this practice and educational policy makers encouraged it as well, since it was

²⁰ “The Present Position in Africa,” ACEC Subcommittee, 1939. NA, CO 859/1/9; Plummer, *About Your Food*, 23.

so economical. While created and intended for male teachers, the informal rule was that their wives were not only welcome but desired to attend. This way, colonial administrators could double the number of teachers they produced without any extra expenditure. They could invest in a men's school and women could make do as an afterthought. A description on "the training of wives" in Northern Rhodesia, stated that the British teacher's

"cookery demonstrations to 30 women were splendid. A week after every demonstration the women made the same things again under the teacher's strict supervision to see that all was right. In this way, each week showed that the matter was getting across. And it was not to a select few that the instruction was given but to the whole group of wives at the school. For the revision lessons the women brought their own materials for cooking in school and then took their finished product home for the family meal."²¹

As fellow students in teacher-training and as fellow teachers, African wives served a crucial and prominent if uncodified role alongside African men.

More numerous and less prestigious, marriage-training schools were another popular option. These short programs, usually a few months long, prepared women for household chores without a mind to future career work such as through teaching. British educators and administrators claimed that African men frequently complained that their wives could not cook, which the British happily interpreted as their cue to create marriage-training schools to impart skills such as cooking and cleaning. While these schools awarded certificates for completion, the certification did not carry the credibility of other certificates from more rigorous programs that would qualify an African woman to teach or nurse.²²

²¹ *Annual Report upon Native Education for the Year 1933*, Northern Rhodesia, 1934 CO 795/72/8.

²² Denzer, "Domestic Science," 127.

While most African girls could not attend school year-round or for very many years, less formal and less time-consuming education opportunities popped up in a variety of forms, such as through welfare clinics, health visitors, village demonstrations, and short courses in marriage-training. While many African women still did not have quick or easy access to these resources, they were more attainable than a full, formal school education. Nurses, teachers, or former primary school students might visit a village and demonstrate how to cook a meal, or a nurse might give a lesson in proper child-feeding to the visitors of a maternal and infant welfare clinic.

Sporadic and unstandardized, these lessons nevertheless formed a significant part of the strategy of educating African women and girls, and better fit the needs of African girls and women, sometimes in unintended ways. As one Asante woman remembered from her encounters with a hygiene demonstration in the 1930s, “it is good to have a white woman bathing your children... You are just lucky to have whites who are bathing your children for you!”²³ For whatever reason African women chose to access these domestic science lessons, flexible school schedules enabled African girls and women to work lessons into their existing schedules of farming and tending to their homes. While formal, Monday through Friday, nine-to-five education with students sitting down in a classroom was the British dream, it was seldom the African reality.

Defining African women’s education and even defining who the pupils actually were posed a tricky question to colonial administrators because much of the education was informal, opportunistic, and ad hoc. As colonial governments took greater interest in

²³ Allman: Adwoa Tana, Tafo, 23 June 1992, cited in Allman and Tashjian, *I Will Not Eat Stone*, 204.

African women's education, they established government schools, often with the help of the Colonial Development Fund and the Carnegie Fund. The struggle to balance state interest in women's education with the ability to fund it remained a challenge, as the Director of Education's letter illustrates. He stated how "the Carnegie Corporation are prepared to give £1,000 per annum for four years toward the establishment of ... schools for men and women in Northern Rhodesia. Northern Rhodesia does not propose to establish a school for women but the London Missionary Society are intending to do so and the Government of Northern Rhodesia would make a grant." Forced to prioritize with limited funds, colonial governments often elected to expand male education and continue to allow the missions to pick up the slack for female education.²⁴

For all of the British discussion about the lag of female education and the need for special, separate schools and classes for girls and women, the lack of funds prohibited the concept from fully becoming reality. While most African colonies had at least one girls' school, female education went beyond the girls' schools in different ways in different colonies. As for the types of schools the government did create, girls' boarding schools were one of the main types of institution built by colonial governments. These schools, usually in or near cities, were elite, degree-granting institutions that reached few students, often only a few hundred or less. A typical day at a state girls' boarding school included both traditional subjects such as writing and math, and practical education in domestic science.

²⁴ Hans Vischer, *Proposed Establishment of a Jeanes School for Training of Teachers*, 1928. CO 795/23/6

Another aspect of African female education that made it difficult to define was the cooperation between government and mission schools. While the Colonial Office took more of an interest in African female education in the interwar period, colonial governments were short on funds to expand state education. Used to working with a shoestring budget, colonial governments naturally took advantage of the comparatively robust network of mission schools already on the ground, the Department of Education overseeing the mission schools as the education equivalent of indirect rule. Disseminating the latest ideas on nutrition science education, the Department of Education sought to create a veneer of colonial government pedagogy over existing mission schools, streamlining all colonial schools under the goal of nutrition science education based on the latest scientific knowledge. Envisioning schools within a narrow, traditional framework, government school administrators focused on education for children ages nine through eighteen. Mission schools, with decades of practice experimenting with different education styles to work with their environment, included younger children and adults.²⁵ This choice reflected the broader dynamic between mission and state schools. Mission schools, which were older, more established, and more invested in reaching all members of the population to save their souls, had more experience with African colonial teaching, which led to a willingness to diverge from traditional British education norms. While this gave mission teachers a different perspective on the goals and methods of education, these differences were an important reason why the state also needed mission schools in order to attempt to end malnutrition through education. Harnessing this

²⁵ ACEC Subcommittee on the Education and Welfare of Women and Girls Meeting Minutes, 1940 NA, CO 859/1/9.

widespread educational network, the Department of Education aimed to coordinate all education systems under its umbrella.²⁶

In addition to providing government grants to subsidize mission schools, colonial governments also borrowed heavily from their pedagogy. Smaller than state schools but also more numerous, mission schools had, since the nineteenth century, been structured to educate an African workforce for colonial projects. While the projects evolved in the interwar period, the idea that schools should prepare Africans for them remained. For example, many schools maintained school gardens to teach students about agriculture. Teachers liked to encourage their students to grow ingredients that would be used in the school meals, emphasizing the cultivation of a variety of vegetables for a proper mixed diet. Without this stipulation, male cooks at boys' boarding schools "do not worry about any variety [and put] in odd peppers or the other odd things that come into the other diet," unlike their wives and mothers at home.²⁷ Despite these male cooks' shortcomings, African women's nutrition education remained at the center of the discussion.

Reviewing the problems with the state of women's education, colonial educators had three main concerns: irregular attendance, a high attrition rate, and the fear that students would forget their lessons when they moved back to their villages. Acknowledging that regular attendance, high wastage, and an inability to make lessons stick were problems, colonial educators came up with different types of courses to try and accommodate African women's busy schedules and remote locations. For example, teachers might offer shorter courses given periodically. The exact structure varied from

²⁶ Fajana, *Education in Nigeria*, 24, 29.

²⁷ Economic Advisory Committee, Committee on Nutrition in the Colonial Empire. Notes on Sir Walter Johnson, Medical and Sanitary Services, Nigeria. February 24, 1937. CAB 58/200.

place to place. In Southern Nigeria, “the Methodist Mission organizes each Quarter a residential course lasting one month. Married women are allowed to bring one baby with them. During the intervening months the women are visited by the teachers who travel round.”²⁸ If they failed to regularly bring students to their classrooms, they tried to bring their classrooms to their students. Another way that one enterprising instructor tried to reach students was via correspondence courses. Mrs. Owen of Kavirondo, Kenya conducted regular correspondence courses, one letter per month, for four years, in both English and native languages.

Ultimately, many educators dreamed of the schools they established evolving into giant, bustling community centers that included a library, maternal and infant welfare centers, and spaces to socialize, sing, make crafts, and so on. While these robust multipurpose centers did not materialize, the established maternal and infant welfare centers remained popular. These centers offered individual counseling for the mothers who availed themselves of the center’s services. In addition to providing nutrition information on a case by case basis, centers also offered public demonstrations of good hygiene and proper nutrition that were open to the entire community to attend.

By the numbers, colonial educators themselves admitted that domestic science education only reached a small percentage, some estimated as little as one percent, of the African population in the mid-1930s.²⁹ These bleak numbers became bleaker in the

²⁸ ACEC Subcommittee Meeting Minutes March 5, 40 CO 859/1/9.

²⁹ Colonial Office Response to Esdaile’s *Education: Domestic Science in the Colonies* NA, CO 323/1415/3.

specific case of Nigeria, where increasing enrollment for Nigerian female education, particularly among the Yoruba, did not occur until the mid-1930s.

In conclusion, all of these different modes reveal the ad hoc nature of African women's and girls' education across the continent and over time. Victorian mission values comprised the bedrock of African domestic science education, which went on to become both more scientific and more career-oriented in nature, like its British counterpart. Ultimately, nutrition education via domestic science advanced unevenly through all the various types of ways that the British reached, or failed to reach, African students.

The Schools: Berridge House and Queen's College

Across Britain and concentrated in London, domestic science schools catered both to working and middle-class students, with specific schools designated for different classes. For example, two of the most well-known schools included King's College for Women, designed for upper-middle-class women, and Berridge House, for working-class women.³⁰ The National Society's Training College of Domestic Subjects, Berridge House, Hampstead was the "most renowned institution of this type."³¹ Established in 1909 by the National Society for Promoting Religious Education and formally opened by Queen Victoria's daughter Princess Christian, Berridge House first came under the leadership of Miss Turnbull as Principal. Former colleagues and students remembered her as "a solid rock to her teaching staff [who] did much to further the cause of domestic

³⁰ Canham, "The Rise and Fall," 36.

³¹ Berridge House Prospectus 1931-38 LMA, ACC/900.

subjects in the teaching world where she had great influence.”³² The camaraderie among staff and students fostered a loyal atmosphere in which many of the school’s employees had themselves been former students. For example, Margery Maughan attended Berridge House in its early years and went on to serve as the Principal from 1926 until 1950.³³

Under Principal Maughan, Berridge House grew to over 200 students, over a hundred of whom lived on campus by the 1930s.³⁴ The campus’s location in Hampstead proved popular since, as one student recollected in the school’s early years, “the mean streets, slums, noisy electric trams, shrieks of railway engines, rattle of milk cans, shrill cries of the milk vendors... used up air, barely a glimpse of sky, nowhere a restful patch of green... were exchanged for breezy, healthy, happy Hampstead.”³⁵ Removed from the bustle and grime of the heart of the city, Berridge House provided working-class girls with a space to foster more genteel pursuits. In the 1890s-1900s, domestic science schools for the working-class like Berridge House recruited girls who would go on to become maids to rich families. By the 1930s, Diplomas in Cookery, Laundry work, and Housewifery, recognized by the Board of Education, raised the profile of this type of women’s work and opened new professional possibilities. Examined by both the Board of Education and the University of London, Berridge House students enjoyed a legitimacy that only British higher education credentials could provide.³⁶

Finally, as a school for working-class women, one of the primary goals of Berridge House entailed transforming ill-mannered working-class street urchins into

³² Handley, *The College of All Saints*, 33.

³³ Handley, *The College of All Saints*, 32.

³⁴ Handley, *The College of All Saints*, 34.

³⁵ Handley, *The College of All Saints*, 31.

³⁶ Berridge House Prospectus 1931-38 LMA, ACC/900.

refined ladies with middle-class sensibilities. The school realized its Pygmalion task through food, in both its coursework and its rules for boarding students. In addition to teaching students about proper nutrition and how to cook nutritious meals, the students who lived on campus also had to eat dinner at the college seven times a week, as well as take tea there at least three times a week. These regulations theoretically imparted middle-class civility through food etiquette and preparation, which also constituted an important part of the colonial project in Africa.³⁷

Berridge House also had colonial connections. The school proudly proclaimed on the cover of its yearly prospectuses that “teachers who have passed through the College are, many of them, holding responsible positions both in this country and in the Colonies.”³⁸ While the London School of Hygiene and Tropical Medicine served as the only institution to provide classes specifically for women travelling to the colonies, Berridge House provided the broad training for women to work there. Not only did the school send British women out into the colonial empire, but it also trained students from the colonies as well. From the late 1920s to the early 40s, there were about as many students from Africa in attendance at the Berridge House as there were from Wales. In that span of time, eleven students, hailing from Uganda, South Africa, Southern Rhodesia, or Egypt, completed domestic science programs. The school represented a clear flow of multidirectional exchanges of both people and ideas surrounding nutrition education. The most likely reason that no students from Nigeria attended was because Lagos was home to one of the best domestic science schools in all of Africa.

³⁷ Berridge House Prospectus 1931-38 LMA, ACC/ 900.

³⁸ Berridge House Prospectus 1931-38 LMA, ACC/ 900.

Established in 1927, Queen's College in Lagos, Nigeria became the first government secondary school for girls. Because male education authorities did not consider a government school for girls necessary, British and Nigerian women spearheaded the project of constructing and running the school.³⁹ When Queen's College opened, founding principal Faith Wordsworth insisted on "the importance of education for the country's future mothers"; in concert with her, the Acting Governor additionally proclaimed that "educated women ensured a nation's progress."⁴⁰ The women involved, both British and Nigerian, had additional goals in mind.

In 1931, Gladys Plummer became the Lady Superintendent of Education for the Southern Provinces of Nigeria, playing an active government role in girls' education. According to Denzer, "[f]ormer female colleagues and Yoruba teachers remember her as a determined individual with a very strong character, as 'larger than life'... She employed tact, tenacity, and diplomacy with both her chauvinist male colleagues and Nigerian parents in order to win support for more opportunities for girls."⁴¹ Trained in domestic science herself, Plummer ultimately devoted nineteen years to Nigerian education, retiring from her position as Deputy Director of Education (Women) in 1950. Beginning with her 1931 appointment, she made the government policy of increased domestic science education a reality, using her position to prioritize and advocate for Nigerian women's professional advancement in colonial society.⁴² While Plummer actively

³⁹ Denzer, "Domestic Science."

⁴⁰ *Nigerian Daily Times*, 11 October 1927; *Nigerian Spectator*, 8 and 15 October 1927, cited in Denzer, "Domestic Science," 123.

⁴¹ Alexander Manuscripts, 2; interviews in Ibadan with Mrs. Kemi Morgan, 29 March 1990, and Mrs. Folayegbe, 1990 Akintunde-Ighodalo, 1990; cited in Denzer, "Domestic Science," 123.

⁴² Denzer, "Domestic Science," 124.

supported colonialism through the education system, she also worked to carve out better opportunities for women within that system.

In addition to impacting the colonial food system and economy, the Great Depression also impacted the colonial domestic science system, slowing the growth of colonial domestic science, especially because of the lack of qualified female teachers.⁴³ In the mid-1930s, after being told no due to budget cuts, Plummer opened a center for domestic science teaching, one day a week for students from the surrounding co-ed, or mixed, schools. Between Queen's College and the domestic science center, Nigerian girls and women in and near Lagos had multiple opportunities to earn various domestic science credentials. British education and policy leaders saw these programs as their chance to make their intervention in colonial nutrition. Nutrition science education, uneven and unstandardized, appeared in varying ways in these programs.

If British domestic science schools such as Berridge House aimed to transform uncouth working-class girls into prim and refined women with middle-class manners, African domestic science schools included additional layers of race and the civilizing mission, although the implementation of British educational and nutrition norms advanced unevenly across the continent. For example, some African school girls were allowed to wear native clothes to school, while in others, girls wore European-style clothes, including white aprons for cooking.⁴⁴ Much like the colonial dream of spreading nutrition science through female education, the colonial dream of spreading civilization through female education often came up short. The staff, time, money, and other

⁴³ Denzer, "Domestic Science," 125-6.

⁴⁴ Plummer, *The Teaching of Domestic Subjects in Africa*, 49.

resources devoted to the project remained too thin on the ground to achieve dramatic, widespread change. Major centers such as Lagos, with more resources and higher populations of Europeans and westernized African elites, saw the most widespread adoptions of western norms. In Queen's College, domestic science lessons imparted not only ways to cook, but also ways to eat. For example, the school schedule built in a meal schedule informed by the western norm of three meals a day. Western eating habits were inseparable from western cooking lessons.

Material Realities of Domestic Science Facilities in London and Lagos

The campus of Berridge House and domestic science schools like it came equipped with teaching kitchens, or what *Good Housekeeping* referred to as “kitchen-laboratories.”⁴⁵ In these kitchens, students learned not only how to cook food, but also the underlying scientific processes by which food cooked, including the ways in which cooking changed the chemical composition of carbohydrates, fats, vitamins, minerals, and thus the nutritional content of the food.

Kitchen technology experienced an interesting period of flux in the interwar period as homes became increasingly electrified. While Ideal Home Exhibitions touted the latest cutting-edge cooking technology, older models of appliances and utensils were of course still widely in use.⁴⁶ It was impossible to standardize kitchens, cookbooks, and domestic science classes as women across England used anything from a coal heater to an electric oven to cook their meals. The wide range in cooking methods created a wide

⁴⁵ *Good Housekeeping, ABC of Cookery*, BL 7941c.31.

⁴⁶ Ina Zweiniger-Bargielowska, *Managing the Body: Beauty, Health, and Fitness in Britain, 1880-1939* (Oxford: Oxford University Press, 2011).

range in cooking science as well. As a popular textbook on food science explained: “The means by which the heat is supplied should...be taken into account, since in a coal- or in an electrically-heated oven, the heating is chiefly by radiation, whereas in the ordinary type of gas cooker the heating is chiefly by convection, and it is unlikely that uniform results would be obtained under such different conditions.”⁴⁷

As the British Medical Association’s 1935 *Family Meals and Catering* explained, “the coal range in use to heat the home and dry clothes would be adequate for the cooking.”⁴⁸ To be useful to as wide an audience as possible, the BMA wrote their official cookbook’s recipes with the more versatile coal heater that poorer families were more likely to have in mind.⁴⁹

Learning the science and methods of nutrition and food preparation through various methods and different technologies, especially as those variances related to class differences, provided domestic science students with flexibility and adaptability. More than their lessons, learning these qualities may have been the best preparation domestic science students received for teaching in Africa.

Colonial educators warned that English domestic science graduates would be in for a rude awakening on the ground in Africa, where the programs’ facilities stood in stark contrast to those in England. As Plummer described, British domestic science teachers would “have to cope with oil lamps and cooking by wood, and extremely

⁴⁷ Kenneth Tinkler and Helen Masters, *Applied Chemistry Vol.II* (London: Crosby Lockwood and Son, 1932), 228.

⁴⁸ BMA, *Family Meals and Catering* BL, R.AC.3822/16.

⁴⁹ This choice stood in stark contrast to other cookbooks that included optional directions to give to one’s servants.

primitive apparatus.”⁵⁰ For example, specifications for domestic science classroom buildings near Lagos described thatched roofs and mud sheds, forty feet by twenty feet in size, to accommodate between twelve and sixteen girls per class in the subjects of cookery, laundry, and housewifery.⁵¹ The sheds “should be open on all sides, with a [three foot] wall, and a good overhang to the roof” as well as a high ceiling to help keep oven smoke clear. Finally, classrooms needed a mud or cement platform for pots, utensils, and other classroom items, because, according to the Lady Superintendent, “there is no reason why all cooking should be done on the ground.”⁵² Not only were the buildings themselves quite different from what “qualified” domestic science teachers were used to, but students themselves often built or helped the men in their community build the school buildings.

The method of cooking posed another challenge to domestic science teachers tasked with cooking both English and African recipes in African kitchens. African students wanted to learn English recipes, which, while more familiar to the teacher, nevertheless had to be adapted to the ingredients and kitchen technology available. African students, more comfortable with the ovens they had grown up using, had to figure out how to cook foreign recipes in familiar kitchens. Teachers attempted to teach African recipes most of the time, which added another layer of difficulty for the teacher, who was naturally less familiar with the subject matter than her own students.

The Lady Superintendent explained, for example, that “bread is becoming very popular in Africa, and most girls like to learn simple cake-making. Baking is not an

⁵⁰ Replies to the Domestic Science Circular, Appendix V, 1937 CO 859/1/9.

⁵¹ Plummer, *The Teaching of Domestic Subjects*, 10.

⁵² Plummer, *The Teaching of Domestic Subjects*, 10.

African method of cookery, so an oven of some kind must be made.” It was possible to bake bread in big pots using a particular method in which “the bottom of the pot is filled with a layer of sand, on which the baking tin is placed...excellent bread and cakes can be cooked this way.”⁵³ The teachers knew the recipes but not the methods of preparation; the students knew the methods but not the recipes. Together, African students and English teachers forged a new style of domestic science lesson with distinct English and Nigerian elements.

Like in England, kitchen technology was evolving in Nigeria as well. Mud ovens made a popular choice for domestic science classrooms, according to the Lady Superintendent, because they were easy to make, affordable, and the materials were readily available. Like the ovens for the typical domestic science classroom, the list of supplies also appeared basic, pared down, and English-inspired. Even though English ovens had not made their way into Nigerian domestic science classrooms, teapots, tea cups, tea spoons, dessert spoons, sugar basins, and egg whisks earned a place on the list of basic requirements alongside grinding stones and cooking pots.⁵⁴

Degrees and Courses in Britain and Africa

Berridge House included a variety of degree programs, single courses, and individual afternoon demonstrations to accommodate a range of desired proficiency levels. This wide range of options served the twin goals of creating more professional opportunities for women and of uplifting working-class women by teaching middle-class values and skills. Between kitchen hygiene, mealtime etiquette, and the preparation of

⁵³ Plummer, *The Teaching of Domestic Subjects*, 11.

⁵⁴ Plummer, *The Teaching of Domestic Subjects*, 20.

nutritious food for families and customers, cookery classes aimed to impart both the values and the skills of a modern, rational housewife, food inspector, or caterer.

Domestic science curricula covered an array of different types of cookery categorized by skill level, food content, and who was expected to eat the meal. Plain and advanced cookery referred to the skill level required to make the meals, with advanced cookery relying on more complicated techniques. Superior or high class cookery referred to the content of the meals, which were gourmet meals prepared with high-quality ingredients. The term frequently connoted the use of unusual ingredients. Sometimes health experts in both Britain and Africa derogatorily referred to this type of cooking as “fancy cooking” because they considered the skill a waste of time and effort in the fight against malnutrition. Finally, “special diets” catered to specific groups of people with particular dietary needs. Invalid diets were by far the most frequently-taught “special diet.” Vegetarian diets, though commonly dismissed as “faddish,” made their way into the curriculum as well.

Degree programs included a one year degree which provided qualifications for advanced cookery or needlework, a two-year degree in household management, laundry work, or cookery, science, and education. The school also provided even more advanced degrees, including a three-year program in household management plus a specialized subject such as cookery or needlework, and finally, a four-year program in household management plus dressmaking and tailoring. Indentured students from London paid £30 a year, while the rest paid £78 a year for these programs.

The school provided two year courses on two separate tracks: one for students intending to become domestic science teachers themselves, and one for students

intending to go into another, related field such as catering. For domestic science teachers, two-year courses included cookery: “to include a knowledge of principles and methods of cookery; preparation of meals suitable for various types of households; marketing...storage...preservation... the source, production, and manufacturing of foods...dietetics; food budgets...”⁵⁵ As for the “certificate for students not wishing to train as teachers,” there was a two-year course in Institutional Administration, which included studies in plain, superior, and advanced cookery with dietetics, wholesale buying, and storekeeping. Courses to prepare women to be matron housekeepers included plain and superior cookery, dietetics, invalid cookery and special diet, household management, and hygiene. Berridge House also offered a one-year course for “lady cooks,” which included “all branches of cookery and dietetics, including menus, simple diets, etc.” This course cost £15.15s for London students. Finally, individual, one-semester courses available for housewives included “plain cookery theory and practice,” a cooks’ certificate in plain cookery and dietetics, superior cookery including invalid and vegetarian cookery with dietetics, advanced cookery and dietetics, advanced cookery and dietetics for demonstrators, institutional experience, and a cake-baking course.⁵⁶

Women thus had a range of choices at Berridge House from a three-year degree to individual afternoon demonstrations where they learned the science of cooking and, increasingly, the science of nutrition, or at the very least, household budgeting for healthy meals. Berridge House described its various cookery courses of study. For example, the basic cookery course ultimately sought to give students the ability to explain the “‘why’

⁵⁵ Berridge House Prospectus, 1931-38 LMA, ACC/900.

⁵⁶ Berridge House Prospectus, 1931-38 LMA, ACC/900.

and ‘wherefore’” of cookery processes using elementary science. The popular 1932 textbook *Applied Chemistry: A Practical Handbook for Students of Household Science and Public Health, Volume II: Foods*, outlined these processes and provided experiments to illustrate them.

The experiments revealed the emphasis on hard science that domestic science incorporated. For example, to determine the moisture and fat content of fresh and preserved meat, the book instructed students to “weigh 2 to 5 gms of the meat into a weighed porcelain dish, and dry in a steam oven until a constant weight is obtained...” To determine the fat content, “the dried residue is next extracted with ether to remove the fat; this operation is usually carried out in a Soxhlet extractor... Transfer the dried meat to a special extraction thimble (made of filter paper)...and introduce it into the extraction tube. Connect up the extraction tube with a weighed flask containing ether, and with a condenser... Heat on an electric hot plate (or water bath) for several hours. Distill off the ether in the flask, and dry the residue in a steam oven to a constant weight.”⁵⁷ The next experiments in the book described the “determination of coagulable protein nitrogen” including “albumins and globulins,”⁵⁸ reinforcing the science in domestic and nutrition science. The specialized tools, complicated scientific language, and requisite background of science to apply to cookery demonstrated how quickly and thoroughly domestic science education absorbed the new scientific knowledge of nutrition.

Other sections of the basic cookery course included different cooking methods, cooking technologies, and grocery budgeting. For example, one section of the course

⁵⁷ Tinkler and Masters, *Applied Chemistry*, 163-4.

⁵⁸ Tinkler and Masters, *Applied Chemistry*, 166.

taught the “roasting, broiling, boiling, baking, braising, stewing, steaming, sautéing, frying, etc” all of which impacted the vitamin and mineral content of foods. This section also included a study of the seasons and processes for drying, pickling, and preserving various foods. An entire section of the course was devoted to the study of stoves. As previously discussed, a variety of stoves, each using different heating methods and thus altering both the recipe instructions and potentially the nutritional content of food, were in common use across Britain. Domestic science students needed to cultivate a familiarity with all different types of stoves to be prepared for future careers as well as their own personal stove. While Nigerian mud ovens did not make an appearance in the British curriculum, a course of study that prepared women to adapt to numerous cooking methods may have prepared British domestic science teachers in Africa more than they anticipated.

Another section of the course focused on “kitchen economics,” including the “price and choice of food,” “marketing,” or budget-making, and the “calculation of cheap dinners for an artisan family.” The affordability of nutritious food remained a chief concern of both educators and housewives. If healthy food were unobtainable, the lessons on how to select and prepare it were essentially moot. One of the main driving forces of domestic science education was to help women feed their families on a budget, so lessons on marketing occupied a critical space in the curriculum. While Nigerian food markets varied considerably from British ones, the emphasis on marketing itself carried over to African domestic science classrooms. Feeding into the popular argument that both British and African women’s ignorance and poor grocery-shopping choices resulted in

widespread malnutrition, budgeting lessons remained a fixture in African domestic science lessons.

Finally, Berridge House offered individual classes each week in cookery, laundry work, and housewifery, offering a more informal and casual education opportunity for women who may not have needed credentials for an occupation but who were still interested in learning about domestic science. Students had the choice to pay 1s3d. per lesson, or 10s up front for the full set of 10 lessons, providing flexibility for women with limited time and money. Additionally, the school offered a two-hour “public demonstration of superior cookery [...] once each week on Tuesday afternoons.”⁵⁹ The ten-week course on high-class cookery would set a student back £12.12s. By 1934-5, the school had similar degree and course offerings but at a higher cost of £52 per year. A three year course in all three subjects plus needlework and dressmaking cost £72, and a single course on cookery lasted 42 weeks and cost £36. In 1935, the same year the British Dietetics Association was established, the three-year course on cookery remained essentially the same plus the addition to advanced cookery classes that included diet, “experimental work on foods,” menu building, and catering. By the end of the decade, programs and prices remained the same as they were in 1935. Since the central government did not demand that every ignorant housewife obtain a degree in domestic science, the aggregate of these more easily-accessible individual demonstrations would ideally add up to put a dent in British malnutrition.⁶⁰ Of course, the proliferation of women trained as domestic science teachers made these less-formal demonstrations

⁵⁹ Berridge House Prospectus, 1931-38 LMA, ACC/900.

⁶⁰ Zweineger-Bargielowska, *Managing the Body*.

possible. The web of domestic science education opportunities, from individual workshops to three-year degree programs, fit together on a continuum to create a flexible system of domestic science education which women with different lifestyles could access in different ways. This flexibility as an attempt to reach as many women as possible laid the foundation for British educators in Africa to devise numerous programs at different times and varying price points for widespread accessibility and appeal.

The ingredients and materials necessary for cookery lessons were not cheap, and spending money on food wisely was one of the central tenets of the domestic science program. Selling the final product after a cookery lesson served as a way to economize the lesson and make good use of the food. Students sold fully-cooked meals every weekday afternoon that school was in session.⁶¹ The strict economizing of the 1930s in Britain also set up students to work in an even more cash-strapped education system in Africa, where they also adopted the practice of selling the food they cooked during lessons.

Ultimately, the number and type of courses at various price points provided women from all classes, particularly working-class, with numerous opportunities to learn more about nutrition through domestic science. Earning a degree from Berridge House opened up new career possibilities for women in suitably feminine roles associated with food. More informal, one-time seminars aimed to provide working-class women with as much exposure to nutrition science as possible without the more expensive costs of an entire degree program.

⁶¹ Berridge House Prospectus, 1931-38 LMA, ACC/900.

According to ACEC members, West Africans had an “examination certificate fetish” which drove the desire for African female education. While this “fetish” appeared to parallel the increased desire for British domestic science degrees, the ACEC perceived the British pursuit of credentials as legitimate and the African one as irrational. In any case, education policy makers feared that the drive for an increased number and type of domestic science degrees had decreased the quality of education and made some of the lower-level certificates virtually meaningless.⁶² Africans felt this mistrust as well. In Southern Nigeria, the Housecraft Certificate and the Certificate of Merit, both of which had been given fancy names by the Education Department to appeal to students, did not actually possess the import of other, more rigorous certificates, such as the Teacher’s Higher Elementary Certificate, that provided better credentials.⁶³ For example, Nigerian women considered teaching a high-status job, but the certificates did not qualify them to become teachers. Rather, credentials such as the diploma provided by passing the Standard VI exam, implemented by Plummer to raise the status of domestic science in Nigeria in 1936, gave Nigerian women the qualifications to formally be considered a domestic science teacher in the eyes of the state.⁶⁴

Increased domestic science standards edged out science and math education to eventually favor domestic science and funnel any pure science and math education into the domestic science curriculum, limiting the kinds of jobs women could get after graduation. Accordingly, any nutrition science lessons came under the umbrella of domestic science, taught through practical cooking lessons more often than through hard

⁶² ACEC Subcommittee on the Education and Welfare of Women and Girls 1931 Summary Proceedings on the Education of African Women CO 323/1/9.

⁶³ Denzer, “Domestic Science,” 127.

⁶⁴ Denzer, “Domestic Science,” 126.

science lessons.⁶⁵ In this vein, the most common nutrition intervention through Nigerian domestic science classes consisted of egg dishes and other high-protein recipes, which the British had identified as the most serious deficiency in Southern Nigeria.

The Lady Superintendent remained optimistic that “more advanced pupils will learn something of the science on which the crafts are based. Cookery, for instance, includes not only the preparation of food, but the choosing of meals in order to obtain the best dietetic value.”⁶⁶ She acknowledged, however, that “the study of dietetics has hitherto been somewhat neglected; or perhaps it is more correct to say that, until the value of cookery as a practical subject has been firmly established, it was difficult to include dietetics in a domestic course.”⁶⁷ Even though she lamented the lack of a consistent hard science approach to nutrition, she hoped more lessons of that nature would take hold in the future, and focused on the more practical solution at hand: strategically teaching recipes full of the nutrients Nigerians needed more of in their diet.

Encouraging these recipes resulted in another kind of syncretic domestic science that was neither wholly English nor Nigerian. Caught in a strange bind, British education experts wanted to keep domestic science practices African while also importing some of their own methods, which they considered improvements on traditional African ways. In the realm of cookery, this compromise resulted in a base of traditional African recipes with an English twist, especially when it came to incorporating eggs into meals.

⁶⁵ Denzer, “Domestic Science,” 126.

⁶⁶ Plummer, *The Teaching of Domestic Subjects*, 5.

⁶⁷ Plummer, *The Teaching of Domestic Subjects*, 9.

Plummer urged “the utilization in new ways of foods already available” as an affordable solution to malnutrition via domestic science. Since many of the ingredients the British wanted Nigerians to eat more of, especially meat, tended to be prohibitively expensive, eggs seemed to be the inexpensive, plentiful solution. As Plummer explained, “a wise teacher would include in her syllabus such dishes as poached or scrambled eggs on fried yam, would teach the girls the value of adding a beaten-up egg to a breakfast dish such as eko (cornflour porridge) and of using hard-boiled eggs in soups instead of meat or fish.”⁶⁸ In the African domestic science classroom, teachers covertly taught British nutrition science by overtly teaching recipes with ingredients that targeted regional nutrition deficiencies. The African lessons obscured the underlying hard nutrition science. They also obscured the systemic reasons why nutritious food had become prohibitively expensive for Nigerian consumers: high import taxes, low wages, restricted access to arable land, and poor opportunities to practice mixed farming.

By combining British nutrition science with local recipes, domestic science teachers tried not to overburden their African students with science the teachers feared would be too complicated. If a teacher went beyond focusing on the recipes and ingredients over the more scientific aspects of nutrition, the textbooks available used simplified language and math to explain the concepts. In Plummer’s *About Your Food*, she explained the function of protein in the body. “The body is like a house. It has to be built—that is, it must grow. Sometimes part of a house breaks or becomes old, and has to be repaired... To repair a house we need mud or cement, or thatch for the roof. To build

⁶⁸ Plummer, *The Teaching of Domestic Subjects*, 31.

the body, and to repair it, we need proteins.”⁶⁹ Eschewing the complicated scientific jargon of the British text book, Plummer instead relied on simple metaphors tailored to the lived experience of her students. In addition to using simplified language stemming from racist assumptions about students’ capabilities, there were other factors at work as well. For example, African classrooms almost entirely lacked the technology that made most of the technical jargon necessary. Also, as in Britain, textbook authors in Africa sought to write economical books that could be used in as wide a variety of classrooms as possible. Thus, in a single book, there might be chapters labeled as only for older students.

As for the structure of an average class, British domestic science teachers wanted to use the same practices they had learned in England. Ideally, each student possessed her own set of utensils and supplies. In Nigeria, however, materials could be hard to come by for both teachers and students, so the teachers had to make due with what they had. As Plummer explained, “a cookery lesson in which one girl washes vegetables, another grinds peppers, a third cooks meat, and a fourth cuts up tomatoes and onions, is not of much value; yet this type of lesson is often forced on a teacher because of the scanty equipment provided for her.”⁷⁰ Demonstrations, already considered a critical part of British domestic science training, became indispensable in classrooms where the demo comprised the only opportunity some students had to study the lesson. When students had to share materials, they rotated who got to do the actual work of cooking so everyone had a turn with the hands-on part of the cooking lesson.⁷¹ While demonstrations provided

⁶⁹ Plummer, *About Your Food*, 3.

⁷⁰ Plummer, *The Teaching of Domestic Subjects*, 17.

⁷¹ Plummer, *The Teaching of Domestic Subjects*, 24.

British students with a model for their own work, the demonstrations often *were* the work in Nigerian classrooms.

Finally, the last few minutes of Nigerian cookery class consisted of a review complete with blackboard notes, in which the teacher covered “Domestic science theory.” This section is the part of class that covered the scientific underpinning of the meal the students had just prepared. While this portion took up more time in Britain, and teachers primed students with the theory before they put it into practice, in Nigeria, the theory portion came as a quick explainer to the meal the students had spent the bulk of the class preparing. British teachers considered this step crucial. Plummer emphasized the importance of the review portion of class, especially for girls getting ready to take exams; but some schools did not even have blackboards. Once again, British teachers found themselves editing their methods to adapt to their surroundings. While African girls routinely managed to learn without blackboard notes, British teachers considered the lack or minimizing of this step a loss. Relegating the theory portion until the end of class revealed how Nigerian domestic science classrooms retained some characteristics of British schooling while also evolving in a new context.⁷²

As in Britain, Nigerian classes economized by selling the food the students had prepared in the cookery lessons. As Plummer explained, after a cookery lesson,

“time should be left for ‘dishing up’ i.e., arranging the food nicely for serving... a little time should be left for selling the food which has been made. Sometimes, in a school where the girls have very little money, it is difficult to sell food to them, and other arrangements must be made. Sometimes the teachers will arrange to buy the food. If the girls usually buy it, the teacher should tell them the previous week what food will be made in the next lesson, and ask them to bring

⁷² Plummer, *The Teaching of Domestic Subjects*, 50.

money if they wish to buy. An entry in the account book must be made of all money obtained from sales.”⁷³

Nigerian students also sold their food at the market, especially breads, cakes, and jams, which were the most popular food products. While availability of many ingredients was more restricted and costs higher in Lagos than in London, the domestic science system of selling the food produced in cookery lessons helped minimize food and financial waste, concretely reinscribing the broader lesson of domestic science.

Exams in Britain and Africa

Exams constituted a critical part of the British domestic science curriculum. Both the Board of Education and the University of London examined Berridge House students, which raised the profile of the program and fostered a sense of legitimacy in its graduates. In any domestic science subject, exams typically consisted of two parts: a demonstration and a paper. For example, laundry and housewifery exams included both a practical demonstration of the appropriate skill and a paper on the principles of laundry and theory of housewifery. For the cookery exam, part one required students to make “a complete dinner to be cooked and dished up in a given time without recipes or notes” and part two required “a paper on the theory of cookery.”⁷⁴ In a similar vein, for a fee of £1.1s, the High Class Cookery diploma exam consisted of the student cooking a test dinner for her examiner as well as completing a paper on the theory of high-class cookery.⁷⁵ The dual emphasis on both the practical work and its theoretical underpinning

⁷³ Plummer, *The Teaching of Domestic Subjects*.

⁷⁴ Berridge House Prospectus, 1931-38 LMA ACC/ 900.

⁷⁵ Berridge House Prospectus, 1931-38 LMA ACC/900.

revealed that the domestic science program placed as much emphasis on the ability to understand the science behind the food as it did the actual preparation of the food.

In addition to the interplay of theory and practice, the program also prioritized efficiency. Especially during the cash-strapped 1930s, it became crucial to make every penny of supplies last. The costs of the materials necessary for cookery classes, from food to utensils, added up quickly. The program economically managed those materials by doubling up the tests as demonstrations and by selling the foods prepared in the classes. Hence, the test dinners pragmatically doubled as cooking demonstrations, expanding the use of the meal the student cooked as a test, a learning opportunity for other students, and finally, as dinner. The need for thrift shaped the structure of domestic science cookery exams.

In Southern Nigeria, “domestic science was an optional subject in the Standard VI examination, and in the Higher Elementary Certificate Examination.” If the student elected to train in domestic science, then the exam itself was compulsory at all training colleges for Higher Elementary Certificate Examinations, and elementary certification for female teachers had compulsory domestic science.⁷⁶ In theory, this domestic science exam consisted of two papers and a practical test, clearly inspired by British domestic science exam norms.

Even though the Lady Superintendent insisted in a manual on domestic science teaching that practical exams must be proctored by a “Woman Education Officer,”⁷⁷ she

⁷⁶ Plummer, *The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 NA, CO 859/1/9.

⁷⁷ Plummer, *The Teaching of Domestic Subjects*, 57.

lamented in a report to the ACEC that “[domestic science] was rarely tested by an adequate practical examiner except in one or two cases where European ladies were available to conduct tests. ‘Making a jam sandwich for the superintendent,’ seems to have been the usual sort of test given.”⁷⁸ Per her inspections, the level and quality of work done by Nigerian students rivaled that of their British counterparts, making the substandard testing that much more frustrating. Despite the difficulties of proctoring the test, Plummer’s creation of a Standard VI exam in 1936 raised the profile of domestic science.⁷⁹ Responding to the concerns and desires of Nigerian students, who wanted more career opportunities from their education, the Standard VI exam delivered a new credential and expanded job prospects for the women who agitated for it. Even though the domestic science credentials attainable in Britain were higher than in Africa, in each place, the credentials represented the highest possible level of education to obtain. Nevertheless, the dramatic differences between the rigorous, standardized British tests and the lax, inconsistent Nigerian ones reveal that the underpinning of British standards in African classrooms only stretched so far. The material reality on the ground often meant that there were not enough teachers, schools, supplies, or oversight to make the theory of British nutrition education a concrete reality for even the most elite Nigerian students.

Conclusion

In both Britain and Africa, domestic science courses brought the latest nutrition science into the domestic realm. Central and colonial governments’ increased role in

⁷⁸ Plummer, *The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 NA, CO 859/1/9.

⁷⁹ Denzer, “Domestic Science,” 126.

promoting good health and hygiene broadly resulted in greater state involvement in women's nutrition education specifically. Education, expanded by a state spurred to end malnutrition, served as a project to both advance middle-class women and to provide a paternalistic uplift for working-class and African women. African domestic science facilities, degrees, courses, and exams took their cues from British norms, but British teachers had to respond and adapt to local conditions as they encountered them. Even within Britain, approaches to nutrition through cookery fluctuated considerably due to technology and class differences. While the textbook materials and classroom practices may not have prepared British teachers for African classrooms, the flexibility, adaptability, and money-saving measures of British domestic science set up British teachers for more success in a colonial context. British teachers' and African students' ability to cooperate resulted in a hybrid domestic science classroom inspired by both British and Nigerian recipes and practices.

British and Southern Nigerian women's nutrition science education sat within a broad context of trends in both British and colonial practices. Since the nineteenth century, the British project to spread knowledge of hygiene and sanitation, their project to uplift, civilize, and modernize the working class and nonwhite subjects of the colonial empire, and their project to improve the welfare of British citizens and subjects set the stage for Southern Nigerian women's interwar nutrition education. In both Britain and Africa, domestic science education reinforced traditional gender roles by centering cookery in women's education. At the same time, that education also challenged traditional gender roles by providing women with professional opportunities, other trends which emerged from nineteenth-century practices. Finally, the increased responsibilities

of the central and colonial state to take a more active role in regulating and promoting hygiene and welfare more broadly paved the way for colonial education departments to create formal standards and credentials for African women's nutrition education.

Chapter 3

Making Lemonade out of Lemons: Conflicting British Nutrition Education Policy Approaches and African Responses

According to Gladys Plummer, “we all know the difference between a ‘bad soup’ and a ‘good soup,’ and if we set, say, eight cooks to make soup from the same recipe, the result will often be eight soups looking and tasting different.”¹ In her 1940 handbook for British teachers on teaching nutrition science and other domestic subjects in Africa, conflicting perspectives, prejudices, and personal tastes informed numerous points of view when it came to cookery and cookery instruction. Both literally and metaphorically, there were too many cooks in the kitchen when it came to domestic science education in British colonial Africa. British teachers knew that the success of their programs depended on their popularity among African students, who came from villages and families with their own popular and time-tested methods. Thus, the tables turned on British teachers intending to impose British norms and practices from the top down. Instead, those teachers found themselves in a position of having to make both themselves and their lessons appeal to their students. Domestic science programs thus became a complex negotiation between British and African parties who each brought their own interests and motivations to the table.

Once administrators arrived at education as an important means to end malnutrition, the next task became establishing a nutrition science pedagogy. Domestic science pedagogy evolved in Britain and changed on the ground in Africa in response to local people and conditions. Upon reviewing the scientific nutrition data, African colonial

¹ Gladys Plummer, *The Teaching of Domestic Subjects in Africa* (London: Longmans, 1940), 2.

officials settled on the idea that advancements in scientific knowledge alone were pointless without education to spread that knowledge. Primary, secondary, and post-secondary education for girls and women were well-established in Britain by the 1920s. Nutrition education fit inside that pre-existing paradigm. By contrast, the foundations of state education were largely just beginning in Africa, leading to debates and experimentation in pedagogy.

Coalitions of experts and colonial administrators in Africa settled on the notion that educating African women would solve the problem of colonial malnutrition. However, they struggled to settle on the means of execution for that education. Unlike in Britain, African women's nutrition education became itself a colonial experiment. Education policymakers and teachers, aided by philanthropic organizations such as the Phelps-Stokes Fund and the Carnegie Trust, tried out different kinds of pedagogy to see what worked best. While the colonial education dream was to ultimately reach all African women, even the most feasible educators' plans entailed training a small but elite force of middle-class African women. These women, in turn, would travel to rural villages to educate the rest of the female population. When educators discussed African students, they referred in theory to all African girls and women. In practice, they mainly reached the urban elite and a small but growing percentage of the rural population. In Southern Nigeria, enrollment levels clearly illustrate both the small numbers of students and how enrollment expanded throughout the interwar period. According to Denzer, "by 1906, the total number of girls in government and [mission] schools in southern Nigeria was 1,997. During the 1920s there was a significant rise in girls' enrollment: between 1920 and 1929, the number of girls in government and [mission] schools increased from 7,169 to

13,006. The mid-1930s was the turning point in girls' education... [In 1938], there were 53,062 girls registered in all categories of schools."² As a colony with one of the oldest, most established traditions of mission education, Southern Nigeria's enrollment figures likely outpaced much of the rest of the African continent.

The ultimate end goal of African female nutrition education determined one's perspective on how much of which type of education would work best. Seeking to prevent the rise of a politically-literate elite bent on home rule in India, many British education policymakers turned away from a traditional western education of reading, writing, arithmetic, and science. Instead, they turned to a new type of pedagogy, practical education, which sought to make small, gradual changes to Africans' daily lives. This pedagogical approach led to new challenges for British educators: their desire to teach African cookery meant that they must first understand and master African cooking methods, and then convince Africans that the best way to learn those methods was not from other Africans, but from Europeans in European-run schools. Despite these challenges, British teachers and administrators, who aimed to create Christian, westernized homes and improved nutrition, preferred practical education. Elite African parents and their daughters, by contrast, agitated for a traditional education that would provide them with the most economic and social advancement opportunities within the colonial system. British and African people envisioned different outcomes for domestic science education and thus advocated for different pedagogies, making the domestic

² LaRay Denzer, *Women in Government Service in Colonial Nigeria, 1862-1945*, Working Papers in African Studies No. 136, 3.

science classroom a strategic site of negotiation both between and among African subjects and British educators.

This chapter seeks to make four main points about the pedagogy of African female nutrition education. The first point is that increased attention from the colonial state on female colonial education opened up new opportunities for British women in the empire as both teachers and administrators. Colonial administrators believed placing more British women in charge of African female education would serve African female students' needs better than male teachers who did not understand domestic science. The second point is that the central issue around which British educators' pedagogy debates circled entailed how to carry out a radical civilizing mission without destroying the fabric of African society. After creating a politically articulate class of elites in India, British education departments in the rest of the colonial empire sought to craft a new education paradigm that would accomplish the civilizing mission without also teaching colonial students how to demand home rule and more rights, leading educators to experiment with different types of pedagogy. The third point is that British mission and state school teachers, administrators, and other colonial experts debated the right balance between teaching what they perceived as traditional African recipes versus English literacy, math, and hard science. Determining and executing the right balance of practical and traditional education, British educators hoped, would improve colonial nutrition without leading to detribalization, or social breakdown, although determining the right balance was itself a complex debate. The final point is that Africans themselves were hardly a monolith when it came to what sort of education they negotiated for African girls and women to receive. Africans of different generations and genders used their ability to choose whether or not

to show up to class to negotiate for the kind of education they felt that African women should have. Different visions of future African women, as wives or as employees of the colonial state, led different Africans to lobby for different kinds of British education. Ultimately, elite Nigerian parents and their daughters wanted a custom curriculum of both English literacy and European cookery to provide young Nigerian women with the best social and economic opportunities within the colonial system.

The White Woman's Burden

As the colonial state put more attention and resources toward African female education, colonial administrators looked to white British women to both oversee and execute the project. This call for white women to take responsibility for the moral and physical uplift of colonial women came out of a long, broad context. The infamous white man's burden of civilizing the colonial empire had a lesser-known helpmeet. As the role of the British central government expanded and the welfare and civilization of women in the colonial empire came increasingly under its responsibility, white woman's burden arose as well. Trickleing into the empire in the mid-nineteenth century, British women worked as nurses, doctors, missionaries, teachers, and homemakers in increasing numbers by the 1930s. White women, both British men and women contended, uniquely possessed the skills and understanding required to teach colonial women the art of being a civilized, Christian wife and mother. Female medical personnel gained the trust of and access to female patients more readily. White British suffragists created a colonial network of suffragists of color, with white suffragists' goal to provide a model of enfranchisement their colonial sisters could follow. By the interwar period, white British women had developed a robust maternal paternalism dictating that the spiritual, medical, and political

welfare of women of color in the colonial empire fell under white British women's responsibility.³

As the Colonial Office turned its attention to African female education in the 1920s, putting more white women in positions of power to shape the education system seemed like a logical first step in the context of white women's expanded roles in missions and medical departments. Like mission stations and maternal welfare clinics before them, African girls' schools needed white women's touch to ensure that the state did not overlook African girls' and women's needs. Their educational needs, however, became a contentious subject among both British and African men and women, with white women serving as the intermediaries between the goals of the state and the goals of African female students. White women's roles in prioritizing and raising the profile of African female education helped African women navigate an exploitative colonial system while also reinforcing that system. British women's involvement in shaping African female education highlights the strange place white women occupied in the empire as they coordinated with both white male colonial officials and African students, teachers, and families, all of whom had their own ideas of how African female education should work.

Putting women in charge of female education, policy, and administration comprised a critical first step toward improving the pedagogy of African women's

³ Antoinette Burton, *Burdens of History: British Feminists, Indian Women, and Imperial Culture, 1865-1915* (Durham: University of North Carolina Press, 1994); Margaret Strobel, *European Women and the Second British Empire* (Bloomington: Indiana University Press, 1991); Shula Marks, *Divided Sisterhood: Race, Class, and Gender in the South African Nursing Profession* (London: Palgrave MacMillan, 1994); Jane Haggis, "Ironies of Emancipation": Changing Configurations of 'Women's Work' in the 'Mission of Sisterhood' to Indian Women," *Feminist Review* 65 (2000): 108-126; Margaret D. Jacobs, "Maternal Colonialism: White Women and Indigenous Child Removal in the American West and Australia, 1880-1940" *Western Historical Quarterly* 36 (2005): 453-76.

nutrition education. In Britain, women had increasingly served on school boards and as school inspectors since the late nineteenth century. School administration functioned as a nonthreatening avenue for middle-class women to hold government positions and it made sense to Victorian Britons to have women in roles shaping female education. As early as 1925, official African education policy called for the employment of more women in government service in the Department of Education.⁴ By the 1930s, British colonial educators witnessed the importance of having women in education administration when they attempted to reconfigure female education in African colonial school systems run mostly by men. Education surveys indicated that female education lagged far behind boys' and men's.

The two main reasons attributed to this lag both circled back to a need for more women in administration: first, reports asserted that male policymakers, administrators, and teachers did not suitably tailor education to girls' needs or pay enough attention to them in the classroom. Second, British education did not entice female students because, unlike the promise of a government job at the end of a boy's colonial education, there were almost no equivalent jobs for African women. Importing British education structures to African girls' and women's education would both improve African girl students' education and provide a justification for that education by creating jobs for them when they had attained it. While British administrators wanted British women to

⁴ *Education Policy in British Tropical Africa: Memorandum Submitted to the Secretary of State for the Colonies by the Advisory Committee on Native Education in the British Tropical African Dependencies* 1925.

pave the way in colonial school administration, their ultimate goal entailed entire staffs of African women running local school boards and Education Departments.⁵

In their 1931 proceedings, the all-European, mixed-gender governing board in charge of crafting African female education policy echoed the call for more women in government. Given the indispensable nature of mission cooperation in the realm of education, the board suggested female mission teachers should be placed on government education boards. They wanted all colonial education boards to have at least one or two women, with representation from both state and mission schools. The board also put forth their strong desire for governors' wives on school boards because of their high levels of education, influence, local knowledge, and spare time. The acceptance of all different types of backgrounds and qualifications, from religious to state to one's nuptial relations to government officials, revealed both how entwined state and mission education were in colonial Africa and how thin on the ground female staff was.⁶

By 1939, there were 2,345 European women employed by Government in the whole British Empire. In colonial Africa, numerous Education Departments expressed a desire for even more female employees, with cost standing as the greatest obstacle to that goal.⁷ In Nigeria, this tally included two superintendents of education, one assistant superintendent, one principal, and eleven mistresses.⁸ As for the situation in Southern Nigeria, Denzer explains: "between 1896 and 1938, the number of British women in

⁵ Chris Otter, *The Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (Chicago: University of Chicago Press, 2008); W.B. Stephens, *Education in Britain, 1750-1914* (London: Palgrave, 1998); Joyce Goodman and Sylvia Harrop, eds. *Women, Educational Policy-Making, and Administration in England* (London: Routledge, 2000). CO 859/1/9.

⁶ ACEC Subcommittee on the Welfare of Women and Girls, *Summary Proceedings on the Education of African Women, 1931* CO 859/1/9.

⁷ Cavers, *Appendix III: Report on Domestic Science Teaching in Uganda, 1939* CO 859/1/9.

⁸ *European Women Employed by Governments in Colonial Territories, 1939* CO 859/1/9.

government positions in Nigeria rose slowly from 2 to 27.” British women had their choice of five types of government position: “nurse, lady physician, school mistress, lady superintendent of education, and confidential secretary.” Before 1925, only “nurse” existed as a category available to British government employees.⁹

Educated Nigerian elites perceived nursing as a low-status occupation due to the missionary influence that prioritized teaching. The colonial government, however, prioritized nursing as a colonial career for British women, leading to a disconnect in the kinds of jobs British and Nigerian women envisioned themselves taking. Since British women opened up and legitimized female occupations in the eyes of the state, posts had to be occupied by British women before they opened up to Nigerian women. It was only in the mid-1920s, after the Phelps-Stokes Commission, that the British state saw reason to invest in West African female education and even then, advancements remained slow until after World War II.¹⁰

Gladys Plummer, who served as the Lady Superintendent in Southern Nigeria for most of the 1930s, described the challenges of her post. She explained how, “until [1939] I have been endeavoring to cope alone with the problem of girls’ education... in the Southern Province of Nigeria, an area which, I believe, is three times the size of England and Wales. The job would have been impossible but for the constant support of the Director of Education, the Provincial Superintendent, and the European missionaries. Even so, it has been impossible to give more than cursory supervision in many cases.”¹¹

⁹ Denzer, *Women in Government Service*, 6.

¹⁰ Denzer, *Women in Government Service*, 8-12.

¹¹ Gladys Plummer, *Appendix V: The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 CO 859/1/9.

Despite these limitations, Plummer's lobbying on behalf of her students made the government policy of increased domestic science education a reality. She also created a Standard VI exam in order to raise the profile of domestic science education and open up job opportunities for Nigerian women.¹²

Ultimately, the increase in focus on African female education led to more opportunities for British women in the colonial education service out of a paternalistic notion that they had a unique ability to uplift their colonial counterparts. The central reason British education policymakers advocated for more British women in colonial government positions was to improve the state of African female education. African female education, in turn, was supposed to provide African women with the credentials to themselves occupy government posts overseeing African female education. By 1935, only West African women had reached this level, and even then, the very small numbers of women in Nigerian colonial state posts revealed how even the colony most advanced in this area fell short of where British educators wanted.¹³ Plummer's almost singlehanded ability to influence changes in the curriculum, however, revealed the difference that even one additional post for a female government employee could make for African female education. Putting both British and then African women in positions of power over African female education served as one of the most important first steps in crafting effective pedagogy, even if the process were slow.¹⁴

¹² Denzer, "Domestic Science Training in Colonial Yorubaland, Nigeria" in Karen Tranberg Hansen, ed., *African Encounters with Domesticity* (New Brunswick: Rutgers University Press, 1992), 123, 125-6.

¹³ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

¹⁴ ACEC Subcommittee on the Welfare of Women and Girls, *The Present Position in Africa*, 1939 CO 859/1/9.

Civilizing Revolution without Colonial Revolt

Broadly, the discussion over nutrition education pedagogy occurred within an empire-wide context of British anxiety over the colonial project of civilizing the colonial empire without creating the deep class divisions that would threaten the social stability of the colonial empire. After Britain's creation of an Indian educated elite so westernized it frightened them, British administrators and teachers wanted to create a new education model in the rest of the colonial empire that would not produce a class of colonial subjects with the ability to articulate their desire for more rights or greater self-governance.¹⁵ As Lugard fretted in his *Dual Mandate*,

It is only to be expected that the result of the present system should be to create a prejudice against education, since, as a Sierra Leone chief remarked, 'it teaches youths to despise their elders.' Education has brought to such men only discontent, suspicion of others, and bitterness... and the vindication of rights unjustly withheld. As citizens, they are unfitted to hold posts of trust and responsibility where integrity and loyalty are essential, or to become leaders of their own community in the path of progress. They have lost touch...with their own people... Was there no means by which the disruptive forces of education could be minimized in a country like Africa...?¹⁶

The project of practical education served as the answer to Lugard's rhetorical question. As Kuklick asserts, "anthropologists were wont to prophesy the disintegration (even extinction) of recently pacified societies unless traditional custom was accorded proper respect."¹⁷ Thus, adaptation theory—the notion that small, gradual changes in African daily habits would ultimately civilize the entire population without leading to a sense of

¹⁵ While British administrators occasionally dangled the carrot of African self-rule one day in the future, administrators wanted it on their terms, on their timetable, and within their control, which they had failed to maintain in India by the 1930s.

¹⁶ Lugard, *Dual Mandate*, 429.

¹⁷ Kuklick, *The Savage Within*, 184.

entitlement to home rule—appeared to British administrators and educators as the best strategy moving forward in trying to determine pedagogy in African classrooms.¹⁸

British colonial administrators and educators in Africa went around and around in their attempts to formulate a civilizing revolution that allowed African society to remain stable. As the 1925 Memo on the Education Policy in British Tropical Africa stated, “since...the African woman is facing a revolution in her way of life it is most important to make the revolution as easy for her as possible and not to destroy unnecessarily the old sanctions for conduct.”¹⁹ In accordance with that ideology, adaptation theory relied on a two-step process in which Africans’ way of life slowly and steadily changed radically into a set of western habits including growing, buying, and eating food based on western nutrition science. Colonial administrators and educators believed that the civilizing mission of colonialism was bringing about a revolution in Africa, and the right kind of education needed to help facilitate that revolution. The subcommittee asserted that “dying tribal customs” were already giving way to a “revolution” in African women’s norms and values, and an updated domestic science education must take it into account, and help make it happen.²⁰ Furthermore, they believed that they needed to experiment with

¹⁸ Clive Whitehead, *Colonial Educators: the British Indian and Colonial Education Service, 1858-1983* (London: I.B. Tauris, 2003), 175; Udo Bude, “The Adaptation Concept in British Colonial Education,” *Comparative Education* 19.3 (1983): 341-55; Sybille Kuster, “‘Book Learning’ vs. ‘Adapted Education’: the Impact of Phelps-Stokeism on Colonial Education Systems in Central Africa in the Interwar Period,” *Paedagogica Historica: International Journal of the History of Education* 43:1 (2007): 79-97; Michael Omolewa, “Educating the ‘Native’: A Study of the Education Adaptation Strategy in British Colonial Africa, 1910-1936,” *The Journal of African American History* 91.3 (2006): 267-87; Peter Kalloway, “Science and Policy: Anthropology and Education in British Colonial Africa during the Interwar Years,” *Paedagogica Historica: International Journal of the History of Education* 48:3 (2012): 411-30.

¹⁹ ACEC, *Memorandum on the Education Policy in British Tropical Africa* (London: HMSO, 1925).

²⁰ ACEC Subcommittee on the Welfare of Women and Girls, *The Present Position in Africa*, 1939 CO 859/1/9.

education to properly bring about the revolution. Even by 1935, education documents continued to state that female education in Africa was “still in the experimental stage.”²¹

Knowing that the right kind of domestic science education was crucial to bringing about revolution but not knowing what the right kind of domestic science education was, colonial educators mandated that experimentation in African domestic science education was a necessary step in bringing about the westernized African future they envisioned as just around the corner. The African civilization revolution that the subcommittee believed in would require experimentation in domestic science education for African women.

British colonial experts placed the responsibility of transforming Africa’s future squarely on the shoulders of African women. Quoting a colonial administrator, one education report asserted that “in Africa...uneducated women are a brake on the wheel of progress.”²² If the revolution were truly to occur in colonial Africa, the subcommittee, in conjunction with the wider system of colonial educators and administrators, considered African women’s education paramount to achieving it. To illustrate this point, the subcommittee raised the examples of some highly trained African female health workers who received their education in England, claiming “these women form the vanguard of African womanhood of the future.”²³ Educating African women with English teaching methods would ostensibly pave the way to a civilized and enlightened African future, a future which the subcommittee insisted would entail more responsibilities for African

²¹ Memorandum of the Education of African Communities, 1935. CO 859/1/9.

²² Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 CO 885/67.

²³ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

women than in the past, necessitating an educational system revamped and refined though experimentation.²⁴

In particular, domestic science teachers felt the need for experimentation in effective teaching methods to bring about the revolution in nutrition science through domestic science education. Calls for the importance of teaching science at the elementary level increased because, according to concerns raised in the subcommittee, African women relied on superstition and “ju jus” to prevent famine.²⁵ The need for new knowledge and a new approach to that knowledge dominated the discussions of domestic science education. Domestic science education would both facilitate the dawn of the new African future and also make up a part of it—it would bring about the revolution and be the revolution itself.

British educators, however, wanted to both revolutionize and preserve African women’s lives and domestic habits. The domestic science education experiment largely involved tinkering with what aspects of English and African teaching methods and skills were worth keeping and which should be discarded. These discussions included both old and new subject matter and old and new ways of teaching it.²⁶ Not only did the British want to avoid a dramatic division between educated, westernized elites and the rest of the African population, they also wanted to avoid the growing divisions between men and women. Another layer of adaptation theory involved avoiding what Jean Allman and

²⁴ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

²⁵ ACEC, *Memorandum on the Education Policy in British Tropical Africa* (London: HMSO, 1925).

²⁶ ACEC, *Memorandum on the Education Policy in British Tropical Africa* (London: HMSO, 1925).

Victoria Tashjian term “gender chaos.”²⁷ Gender chaos refers to the breakdown in social relations between African men and women as men, both British and African, used the colonial system to systematically cut off avenues of economic, political, and social power traditionally accorded to African women and African women’s responses to this curtailment. For example, Nigerian women traditionally enjoyed active roles in the barter economy. Under the British, however, the currency transformed to cash and the only means of obtaining it was through colonial employment, which overwhelmingly hired Nigerian men over women. If British educators wanted to craft a pedagogy that incrementally prepared Africans for western, civilized life in general, they also wanted to craft a pedagogy that specifically prepared African women for western, middle-class-style subjugation to their husbands. Overeducated African women, British educators feared, would refuse to settle for less-educated African men and cause irreparable rifts in African society.

To these ends, the general consensus of British colonial educators held that the most effective way to adapt African women to this revolution was to teach African women new values and skills by using familiar frameworks and ideas. Specifically, one of the subcommittee’s main goals involved using an English classroom model staffed with traditional African educators, teaching traditional African recipes that were also in accordance with British nutrition science standards. Thus, a medical report on the status of nutrition in colonial Zanzibar tied together adaptation theory, domestic science, and improved nutrition. The report argued that “the establishment of rural girls’ schools with

²⁷ Jean Allman and Victoria Tashjian, *I Will Not Eat Stone: A Women’s History of Colonial Asante* (London: Heinemann, 2000) xxxiv.

a bias toward domestic science adapted to native life, would constitute an important step forward in the campaign against faulty dietetic habits.”²⁸ What “domestic science adapted to native life” looked like in practice remained a source of debate.

Unsurprisingly, the subcommittee went back and forth on the merits of which African and which English educational traditions to keep for a progressive future and which to abandon to what they wrote off as a backward past. Freely and frequently acknowledging that they lacked enough knowledge to craft a clear and overarching education policy for African girls and women, colonial educators and policymakers wanted more research on African women’s daily lives and needs before moving forward with a plan. They wanted to amass all British knowledge of education and social work among African women in an anthropological and sociological study, conduct a survey of educational needs of African women and girls and the effect of education on them, discuss future development, and ostensibly give African women adequate support for the coming revolution of the manner of their daily lives.²⁹

To better inform education policy, the ACEC appealed to prominent British female scholars who studied and worked with African women. Colonial experts’ different backgrounds gave them different perspectives on the goal and methods of African female education, which made education policy consensus difficult. For example, Margery Perham, a prominent expert on British Africa, advised on matters of women’s education. As a historian and lecturer on colonial administration, her work in Africa provided her with a very different perspective than mission or state teachers possessed. As an observer

²⁸ *Nutritional Review of the Natives of Zanzibar*, 1937 CAB 58/201.

²⁹ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

of African societies, Perham prioritized preserving African traditions rather than changing them. Because of this perspective, she found herself talking past domestic science teachers rather than engaging in a dialogue with them. Not only were their end goals of African female education different, but neither side really acknowledged how different their respective end goals were. Perham usually acted as the education consultant attempting to cool the talk of revolution and remind members that one of the goals was to maintain African ways of life. For example, she pointed out that “if we wanted to preserve the structure of African society we must be very careful as to the type of education given to the women” because, traditionally, African women held a considerable amount of political, legal, and economic power in many African societies. Perham contended that men always “go away and leave women to do the work... in the old days, [hunting]; today, [in the mines].”³⁰ For Perham, African women’s education served as the key to maintaining traditions in African society, not slowly changing it from the inside out. In spite of Perham’s talk of preservation, most other educators forged ahead with their dreams of African social revolution and the best ways to bring it smoothly about.³¹

The African school as the center of the community appeared to colonial education policymakers as the best means of social revolution without social divide. British experts wrestled with their twin goals of both bringing about a civilizing revolution in Africa and not bringing the revolution so fast that African society collapsed. One of the biggest challenges that colonial educators identified entailed finding ways to educate African

³⁰ ACEC Subcommittee, *Minutes of the Second Meeting*, 1939 CO 859/1/9.

³¹ C. Brad Faught, *Into Africa: The Imperial Life of Margery Perham* (London: I. B. Tauris, 2011).

students without isolating them from the rest of their community with no European education. The school as community center served as popular solution to this challenge, although the idea remained more imperial fantasy than local reality. The persistence of the idea of the school as community center illustrated the anxiety that colonial administrators and education policymakers felt over trying not to isolate African students from their communities.

British educators tasked with shaping African education policy contended that the strong link between African students and their wider community would play an important role in the future of Africa broadly. British education in Africa purported to change African habits, especially pertaining to their nutrition, from their farming methods to their choice of breakfast food. This scheme depended on the small percentage of students reached by British schools spreading what they learned to their neighbors. British educators fretted that school only comprised a part of the wider education effort, and they grew concerned that the efficiency of British schooling was dependent on how quickly the rest of the African population adopted what they supposedly learned from African students.³² This tie between students and the rest of the African population led to a new colonial education scheme inspired by an existing colonial strategy: the model community center.³³

Anthropologists, mission teachers, and government administrators came together on the idea of the African school as the hub of a wider African community, but with concerns about cost. Their first priority was to maintain a sense of community. They

³² ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

³³ James Scott, *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1999), 258.

feared that a growing education gap divided African communities, but they had a vision for using education as a means of fostering an increased sense of community. The 1935 Memorandum on the Education of African Communities, put forward by the ACEC, formally outlined this colonial belief. It stated that education should not “divorce the individual from the community.” Furthermore, the Memo described colonial educators’ ambitious vision to establish African community centers that included a clinic and welfare center, nursery school, agricultural organizations, church, clubs and classes for all ages and genders, circulating libraries, and a community radio. The aim was to foster a greater sense of community. The ACEC feared that there was no sense of community in African urban centers. The second aim was to tailor the school-communities to “local needs or customs” so as not to disrupt African communities so much that they disintegrated. The Memo pointed to the success of these centers in other countries, hoping for the same success of a model that remained largely hypothetical in Africa.³⁴ The third aim was to render the community school on a shoestring budget, which would be accomplished by “establish[ing] one model Community Centre in each territory,” with subsequent community schools being established “by a process of imitation.”³⁵ By investing in one perfect, central model, the British state could maximize its educational investments.

With such a comprehensive set of services envisioned in the community center, community education required not only the involvement of the Department of Education but also the Departments of Agriculture and Health, as well—a degree of cooperation

³⁴ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

³⁵ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

often touted in state communications but seldom put into consistent practice. As with nutrition science research, nutrition education also needed to be multidisciplinary.³⁶ To that end, educators envisioned the community school centers as working closely not only with both mission and state schools but also with welfare clinics. Amenities would include circulating libraries, radio, and shared agricultural equipment, which would not only prevent African society from degenerating but also had the added result of being cost-effective. The estimated expense of a single community center led to the idea of a model community center; British educators wanted one model community center per colony, which other schools and villages would then emulate to the best of their ability.³⁷

African women's education in particular served as one of the selling points of the community-school. According to colonial educators, the community center would be ideal for the British to test schemes specifically for women's education. Community schools would "enable [African women] to take their rightful place in the development of the country and its inhabitants... woman as mistress of the house and guardian of the young would [help] in bringing about improvements in social and economic life," including nutrition.³⁸ British education experts focusing specifically on African women's education circulated this notion of a school-community, which missionaries and teachers at state-run schools alike regarded as "a very valuable education instrument" for African women's education. Audrey Richards bolstered the claim that community education would best serve the educational needs of African women. She wrote to education experts that traditional African female education existed as part of the community, so it made

³⁶ Scott, *Seeing Like A State*, 258; ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

³⁷ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

³⁸ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

sense to continue that way. At British-state run boarding schools, Richards explained, African girls missed the “domestic crafts” taught in the village, hence the importance of domestic science education “based on accurate knowledge of conditions of village life.” African domestic practices, such as soup recipes, backed up by British nutrition science, represented the perfect marriage between the continuity of African daily life and the African civilizing revolution. Richards’ take on the Memo echoed the wider colonial dream that the combination of African domestic habits and British science would pave the way peacefully into the future.³⁹

Ultimately, ambitious, largely-hypothetical schemes like the school-community revealed the anxiety British education policymakers felt over creating what they saw as the right kind of education in Africa. As wives and mothers, African women played important roles in African society that the British wanted to foster through homemaking lessons rather than challenge through English literacy lessons. While British educators and administrators seldom had a clear grasp on the actual roles of African women in their communities, the British knew enough to fret specifically over female education in their quest to craft an approach to colonial education that would not challenge colonial rule.

Practical versus Traditional Education

Under the banner of adaptation theory, crafting an effective pedagogy stood as a major source of disagreement and debate for both British and African educators. Two broad approaches to education emerged in pedagogical debates on female nutrition education: practical and traditional education. The former emphasized using the

³⁹ Oakden, *Notes on the Education of African Communities*, 1939 CO 859/1/9; Audrey Richards, *Notes on the Education of African Communities*, 1939 CO 859/1/9.

ingredients and recipes African women were already using, while the latter entailed more of a focus on the math and science underpinning those ingredients and recipes. Largely ignorant of African recipes and cooking methods, British educators and policymakers debated how much of each type of education should occupy African female education programs for the perfect balance of incremental civilizing.⁴⁰

In the interwar period, the entirely-European governing body in charge of formulating colonial education policy debated the best means of teaching and the best information to disseminate. Two of the most prominent members, Hans Vischer and Lord Lugard, having shaped Nigerian education policy in the 1920s, used their experience to create a general approach to African education. Their general education policy plan included using education to create an expanded labor force and permanent African underclass for manual, medical, and clerical work in service to the British state. The colonial African education approach was predicated on the notion that Africans were different from and inferior to white Europeans. This belief necessitated a uniquely African education policy operating under the assumption that Africans were less intelligent and unable to occupy the highest levels of administration.

These racist assumptions still left considerable wiggle room for determining the best African domestic science pedagogy. This ambiguity provided African women with an entry point into the conversation and an opportunity to bend the direction of education towards their own professional goals. Education policymakers generally agreed that African female education “should be neither that of the English girl nor that of the

⁴⁰ Clive Whitehead, “The Historiography of British Imperial Education Policy, Part II: Africa and the rest of the Colonial Empire,” *History of Education*, 34.4 (2005): 441-54.

African man,” but rather tailored to African girls’ own specific lives and needs as future wives and mothers.⁴¹ Contending that African girls had a unique place in society that required a specialized education, colonial educators split on the best way to tailor that education. This split resulted in disagreement over whether colonial education policy should be of a more practical or more traditional nature.

Practical education emphasized working with, rather than attempting to radically change, everyday African life and cooking habits, which represented a major departure from the training that teachers received in Britain. At the other end of the educational spectrum sat traditional education, which generally consisted of reading, writing, arithmetic, and hard science, which was more in line with British training. If the goal were to end malnutrition as soon as possible, a practical education that taught African recipes with familiar and accessible African ingredients, not hard science or pastry-baking, made the most sense to many colonial educators.

In some cases, centuries of African trial and error produced more nutritious results than 1930s British practices, which pointed to the importance of a practical education that did not seek to transpose British habits wholesale onto Africans at once. For example, British scientists discovered that European-style clothes prevented adequate vitamin D absorption by covering so much skin. According to a 1930 medical report in the *British Medical Journal*, one doctor wrote that he “should expect the native who wears European clothing, especially in childhood... to suffer accordingly.”⁴² If British

⁴¹ ACEC Subcommittee on the Welfare of Women and Girls, *Summary Proceedings on the Education of African Women*, 1931 CO 859/1/9.

⁴² EAC Memoranda of Committee on Nutrition in the Colonial Empire 5-9 1937. CAB 58/201.

nutrition science supported an African practice, the British felt all the more justified in using practical education pedagogy.

African domestic science policymakers partially informed their views by similar debates in Britain in the late nineteenth and early twentieth centuries. They wanted African educators to learn from the mistakes and experiments that had already happened in Britain. Two women tapped to help formulate African domestic science pedagogy, a prominent anthropologist and a mission school teacher, both suggested that African state education policy should be informed by “our knowledge of educational problems derived from our experience in England.”⁴³ Indeed, a similar debate over whether or not to teach “men’s” chemistry or domestic science to women had taken place in Britain in the late nineteenth and early twentieth centuries as domestic science programs expanded. Female scientists and headmistresses of girls schools in England generally opposed domestic science because they wanted hard science in girls’ curricula rather than relegating women back to domesticity. While most women’s rights advocates also lobbied for teaching women pure “men’s” science, others strategically embraced domestic science as the more subtly subversive way to teach girls and women science without overtly threatening the gendered status quo. In spite of initial backlash by female professionals themselves, domestic science, rather than pure chemistry and physics, took its place as the patriarchy-approved way for British girls and women to learn about science without overstepping their socially-prescribed role as homemakers.⁴⁴

⁴³ ACEC, *Minutes of the Second Meeting*, 1939 CO 859/1/9.

⁴⁴ Marelene Rayner-Canham and Geoff Rayner-Canham, “The Rise and Fall of Domestic Chemistry in Higher Education in England During the Early 20th Century” *Bulletin for the History of Chemistry* 36 (2011): 35-8.

In a familiar refrain, the debate returned in 1930s colonial Africa with additional racialized layers. If education policymakers worried about British women learning complicated hard science, many of them doubly worried about overburdening African women with the complex chemistry and biology of nutrition. As in Britain, there was also concern about wasting an education that a woman would never use in the rest of her day to day life. For example, in a handbook for British domestic science teachers in Africa, the author explained her support of a practical education for African women in response to the African preference for literacy education. She explained how even though many African women push for more literacy education in schools, “a great deal of book-learning, however, is forgotten after the child leaves school; some of it is never used. This is not true of crafts; a craft, once properly learned, can never be forgotten.”⁴⁵ British state education policymakers wanted the most efficient pedagogy possible to get the most out of African education with the meager staff and resources with which they were working. Thus, an education that would have immediate applications and lasting results, which many British experts believed was a practical education, served as a popular pedagogy.

Another practical education advocate and vocal doctor complained that in Africa, “the type of education given to girls in some schools is useless as a preparation for their future life; that apart from a smattering of anatomy and physiology, the girls are given little in the training of health matters; and that even where a domestic science course is given it too often consists in the teaching of fancy cooking.” She insisted that going forward, African female education “can scarcely err in being too practical.”⁴⁶ Hard

⁴⁵ Plummer, *The Teaching of Domestic Subjects*, 3.

⁴⁶ Mary Blacklock, *Certain Aspects of the Welfare of Women and Children in the Colonies*, 1936 NA, CO 323/ 1415/3.

science classes might prepare African girls to be nurses, midwives, or teachers, which appealed to career-oriented African girls and administrators in need of employees. Practical education proponents, however, argued that domestic science classes with lessons on how to prepare inexpensive, protein-laden egg dishes would have a far bigger, more immediate impact on malnutrition.

In Nigeria, enticing domestic science students to eat more eggs became a central goal of this practical education approach. The centerpiece of this scheme was the *Kudeti Book of Yoruba Cookery*, a hybrid cookbook/textbook co-written by two female domestic science teachers, one British and one Nigerian, who taught together at a Nigerian school. The book emerged as the product of the advice of practical education advocates broadly and Gladys Plummer, the Superintendent of Education in Nigeria, specifically. She urged “the utilization in new ways of foods already available” as an affordable solution to malnutrition via domestic science. Since many of the ingredients the British wanted Nigerians to eat more of, especially meat, tended to be prohibitively expensive, eggs seemed to be the inexpensive, plentiful solution. As Plummer explained, “a wise teacher would include in her syllabus such dishes as poached or scrambled eggs on fried yam, would teach the girls the value of adding a beaten-up egg to a breakfast dish such as [porridge] and of using hard-boiled eggs in soups instead of meat or fish.”⁴⁷ Consistent with this advice, the *Kudeti* cookbook included traditional Yoruba recipes and added directions such as “make in [the] usual way, but to make it more nourishing add a beaten egg.”⁴⁸

⁴⁷ Plummer, *The Teaching of Domestic Subjects*, 31.

⁴⁸ J.A. Mars and E.M. Tooley, *The Kudeti Book of Yoruba Cookery* (Lagos: C.M.S. Nigeria Bookshops), 39.

The pedagogy of practical education was popular with both British and African people working with African schools. For example, the Nyasaland Department of Education worked collaboratively with local Africans, missions, the Medical Office, and teachers to create the 1933 Nyasaland syllabus for African female education. The syllabus described math class, stating “[the teacher’s] work should be intensely practical and for all general purposes she will only teach Arithmetic when dealing with the household budget.” The syllabus went on to describe housewifery lessons, asserting that “cooking must be practical, i.e., only produce which is readily obtainable, in the average village home should be used. If cooking utensils other than the normal are needed they must be such as can be made easily and cheaply. The main object is to teach girls how to prepare wholesome food, how to obtain variety and how to cater for invalids and children.”⁴⁹ Across subjects, the syllabus emphasized the practical nature of the education.

In a similar vein, Miss Hake, a teacher at a Tanganyikan girls’ school, described the workings of the school since its establishment in 1930. In the beginning, the lessons focused on practical education, which many British educators and public health officials promoted as the best means of improving nutrition. The syllabus had already been created by the Education Department with the approval of the local chiefs. One third of the day was devoted to traditional subjects such as literacy, one third to physical activity, and one third to domestic subjects, including “cookery (native style).”⁵⁰

⁴⁹ Nyasaland Protectorate Education Department Code and Syllabus of Instruction for use in Schools for African Girls and Schools for Training African Women Teachers 1933. CO 852/119/6.

⁵⁰ Ibid.

As time went on, however, the syllabus evolved and both more practical and more traditional subjects made their way into the classroom. The considerable variation of subjects introduced to the school revealed the contentious nature of African girls' education. Hake described how, "From the beginning of April 1930... gradually more objects were introduced into the time-table, such as sewing, native pottery, mat and basket-making, elementary studies in geography and plant life and citizenship."⁵¹ Domestic science as a means of character-building or even as citizenship-training introduced a whole new realm of pedagogical debate running parallel to the debates over practical and traditional education. As input from disagreeing Department of Education officials, public health officials, other teachers, and Africans of different generations and genders influenced the curriculum, the coursework shifted from a focus on practical education to incorporating more traditional subjects as well. The wide array of courses reflected the wide array of opinions on the goal of girls' education and how to achieve it.

Colonial educators generally supported a practical education in which they would teach more or less traditional African recipes, but in a classroom setting and with a few nutrition science-inspired tweaks, or as one domestic science teacher put it, "all done in the native style but a little better."⁵² One of the main challenges educators faced, then, was adapting to African norms and methods when Europeans were not entirely sure what those norms and methods were. Before a practical education curriculum could be set, educators first had to try to understand how African women prepared their meals before trying to emulate them in the classroom. Plummer illustrated this challenge in a report on

⁵¹ Ibid.

⁵² *Female Education in the Colonial Empire*, 1939. CO 859/1/9.

the state of domestic science in Southern Nigeria. She explained how “each tribe has its own system of cookery. The differences are not great to the eye of the unpracticed observer, but it was clear that it would be useless to teach Yoruba cookery to Ibo girls, or Efik cookery to Sobo girls.”⁵³ In their bid to be sensitive to local variations, educators nevertheless had to make due with a single classroom to teach all different kinds of cookery given how few and far between British schools were.

Furthermore, colonial educators remained acutely aware that while they were supposed to be the teachers and the experts, they first had to rely heavily on their would-be African students to teach them the subject matter. African girls and women first had to teach their British teachers how to cook meals the usual way local women would. Only then could the British teacher turn around and teach it back to her African pupils. This subversion of British hierarchical expertise deeply troubled educators and policymakers, who called for teams of British female sociologists to properly understand the local needs and practices of African cookery to inform domestic science education policy and pedagogy. These researchers never materialized in any sort of formal, institutionalized way, but the calls for them revealed how strongly the British wanted to avoid teaching totally unfamiliar subject matter, as well as their desire to gain mastery over a subject about which they felt their ignorance.⁵⁴

Even the most good-faith efforts to learn cookery from African women resulted in their own challenges. For example, Plummer went on to explain that while British teachers tried to learn African cookery from the local women, “there were no recipes

⁵³ Gladys Plummer, *Appendix V: The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 NA, CO 859/1/9.

⁵⁴ ACEC, *Memorandum on the Education of African Communities* (London: HMSO, 1935).

written down; even the best cooks were vague about quantities.”⁵⁵ This frustration revealed a fundamental disconnect between Nigerian and British approaches to cooking, and this disconnect revealed a fundamental problem with practical education. British women could only understand recipes if they were recorded and used standardized ingredients with uniform measures. But recording one definitive version of a recipe with static ingredients in static measures was antithetical to the way that the local Nigerian women cooked. Practical education, then, consisted of what British experts interpreted as traditional African recipes. Like the invention of customary law, in which native courts strategically enforced a syncretic legal code with both traditional and British aspects, other African customs such as cookery could also be invented by the British.⁵⁶ An erstwhile practical education that taught Nigerian recipes as uniform and inflexible ultimately failed to reproduce the local methods that British teachers initially set out to teach.

Furthermore, the cookbooks that domestic science teachers produced were in English, which revealed how literacy and nutrition science education necessarily went hand in hand, in spite of debates that pitted these two skills against each other. With English textbooks and cookbooks, English literacy became a prerequisite for a complete nutrition education, not an elective that took time away from it. African cookery books

⁵⁵ Gladys Plummer, *Appendix V: The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 CO 859/1/9.

⁵⁶ Martin Chanock, *Law, Custom, and Social Order: the Colonial Experience in Malawi and Zambia* (London: Heinemann, 1998); Terence Ranger, “The Invention of Tradition in Colonial Africa,” in Eric Hobsbawm and Terence Ranger, eds. *The Invention of Tradition* (Cambridge: Cambridge University Press, 1983).

written in English demonstrated the intertwined nature of practical and traditional education, and why debates about which method was better proved to be so complex.⁵⁷

Less fraught than the challenges of teaching local cookery, the school garden proved to be another one of the most popular practical education techniques. The idea of the school garden appeared to colonial administrators as the perfect solution to malnutrition across the African continent. In Northern Rhodesia, an annual education report described school gardens as an “essential subject” at a time when administrators debated the importance of literacy.⁵⁸ A report to the Colonial Office about the state of nutrition in Zanzibar asserted that “the paramount importance of [school gardens] cannot be overstressed.”⁵⁹ In West Africa, a 1937 report from Sierra Leone to the Colonial Office expanded on the findings of Dr. Mary Blacklock, who had previously served as the School Medical Officer there. The report explained “that the diet of the general population of this country, as in other African countries, is deficient in certain substances, has been pointed out by many authorities. The effort to make up the deficiency by prescribing medicines containing such substances as vitamins seems an expensive and inadequate method of dealing with the problem. The real solution seems to be widespread education in vegetable culture...”⁶⁰ School gardens even received a mention in J. H. Thomas’s *Nutrition Policy in the Colonial Empire*, one of the central texts circulated through both the League of Nations and the Colonial Office. In his long list of ideas, Thomas stressed the importance of domestic science lessons generally and school

⁵⁷ Gladys Plummer, *Appendix V: The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 CO 859/1/9.

⁵⁸ *Annual Report upon Native Education for the Year 1933*, Northern Rhodesia, 1934 CO 795/72/8.

⁵⁹ *Nutritional Review of the Natives of Zanzibar*, 1937 CAB 58/201.

⁶⁰ *Nutritional Review of the Natives of Zanzibar*, 1937 CAB 58/201.

gardens specifically as both a short and long term solution to malnutrition. He envisioned that school gardens would “instil[sic] into the younger generation improved ideas on diet...thereby not only improving their own health at the time but also initiating them into habits which may be of benefit to them all their lives.”⁶¹ Across the African continent, and from local governors to League of Nations representatives, British colonial administrators latched onto the idea of school gardens as the best means to teach nutrition to African students.

School gardens existed in Britain, but the fundamental point of African school gardens stood in stark contrast to the point of English school gardens, which made education policymakers stop and take stock of the best way to implement them. While British school gardens provided children in urban, industrial settings what might have been their only access to nature, most African students were “practical farmers before they came to school.” African students hoped their schooling would provide a break from farming, not entail more farming. Thus, as the Director of Native Education in Northern Rhodesia put it, “any approach to rural science and school gardening on conventional European lines will almost certainly be fundamentally wrong.”⁶² How to adapt school gardening to African conditions, in a practical manner that did not disrupt African traditions, was the question for educators.

School gardens represented a clear example of what colonial educators hoped practical education could do. They also presented a challenge to British teachers and

⁶¹ J. H. Thomas, *Nutrition Policy in the Colonial Empire*, Despatch from the Secretary of State for the Colonies, April 1936 CAB 58/199.

⁶² *Annual Report upon Native Education for the Year 1933*, Northern Rhodesia, 1934 CO 795/72/8.

scientists who put themselves in charge of teaching Africans the best way to garden, only to realize that British expertise on African farming methods remained uncertain and incomplete. While growing multiple crops in a single field and rotating that field periodically stood as time-tested successful techniques, British imperial scientists imported farming methods better suited for European soils and climates than African ones, placing the priority on high yields of crops rather than taste or even nutritional level. When European farming methods did not perfectly translate in an African context, British agricultural scientists realized their work of trying to understand African soil and climates had only just begun. These agricultural experiments led to tensions both among British scientists and between British scientists and African farmers.⁶³

Concerns over these tensions carried over into the practical pedagogy of school gardens. School gardening “can be taught without dogmatizing about the best way of growing native crops about which we still have much to learn,”⁶⁴ a Northern Rhodesian education policy expert wrote in an appeal to build a new school. In the Northern Rhodesian Annual Education Report for 1933, the Director of Native Education, quoting the Secretary of Agriculture, echoed this anxiety over teaching a subject that Europeans themselves did not have mastery over. He explained how “the schools gardening and rural science idea was certainly introduced to Africa from Europe, but its adaptation to African conditions, in common with that of many other European ideas, has not been particularly happy.” This issue revealed one of the biggest challenges British practical educators faced: their desire to teach African traditional farming methods meant that they

⁶³ James Scott, *Seeing Like A State*, 264; 273-4; 282.

⁶⁴ G. C. Latham, Director of Native Education, Northern Rhodesia, *Proposed Establishment of a Jeanes School for the Training of Teachers*, 1928 CO 795/23/6.

must first understand and master African traditional methods, and then convince Africans that the best way to learn those methods was not from other Africans, but from Europeans in European-run schools. Their failure to accomplish these steps meant the failure of school gardens as a solution to malnutrition.

Despite these difficulties, school gardens appealed to British administrators because they tidily combined teaching how to grow nutritious food with the provision of that nutritious food to the students. As a Northern Rhodesian Annual Education Report explained, “the elementary school garden continued to produce a plentiful supply of food for the kitchen. Appetizing stews of meat, carrots, onions and turnips were appreciated by the lads themselves and must have been health-giving foods.”⁶⁵ School gardens for boy students, like schools for boy students, were more widespread, but colonial administrators had plans for how school gardens could benefit female students as well. The Director of Medical Services in Zanzibar suggested in a report on improving nutrition that “if rural girls’ schools are opened or girls admitted to the sub-standard classes of the boys’ schools, the girls should prepare the meal and the boys assist in the collection of firewood and water, the cleansing of the utensils, etc...”⁶⁶ While most school gardens in the 1930s existed at male vocational schools intended to produce African farm laborers, administrators envisioned that female students would also benefit from school gardens where they could learn to tend family garden plots and cook the food they grew.

For all the colonial hype about hypothetical school gardens, the reality on the spot looked different. In many schools across Africa, school gardens failed to materialize or

⁶⁵ *Annual Report upon Native Education for the Year 1933*, Northern Rhodesia, 1934 CO 795/72/8.

⁶⁶ *Nutritional Review of the Natives of Zanzibar*, 1937 CAB 58/201.

failed to impart the lessons they were supposed to. For example, a 1934 *East Africa* newspaper article confidently titled “Tale of Steady Progress In Northern Rhodesia Native Education”⁶⁷ hinted at some instability over school gardens in the text. The author mentioned “the contempt of parents and other mature Natives for school-gardening” but dismissed it as unimportant.⁶⁸ Despite the article author’s confidence, it was understandably a hard sell for British educators to persuade African parents to encourage their children to leave their homes and families’ farms and garden plots to tend to a school garden instead.

If school gardens endured a mixed welcome in practice, they also invited mixed feelings in schools where they only existed in the colonial imagination, such as in the girls’ schools in Southern Nigeria. In her evaluations of female education, Plummer’s defensiveness about the lack of school gardens was palpable as she explained why they had not become a priority. Girls’ schools already felt compelled to drop traditional subjects such as math and history to prioritize domestic science inside the classroom; prioritizing a garden on top of domestic science felt like too much of an imposition to teachers and administrators. According to Plummer, “African cookery is a long business—soup is an essential dish to nearly every meal and an African soup is not merely a matter of boiling a few bones, but an elaborate affair with much pounding, grinding, and cutting up of ingredients. So it is a little difficult to find time for growing vegetables and cultivating kitchen gardens.”⁶⁹ Already competing with so many different

⁶⁷ *Annual Report upon Native Education for the Year 1933*, Northern Rhodesia, 1934 CO 795/72/8.

⁶⁸ *Annual Report upon Native Education for the Year 1933*, Northern Rhodesia, 1934 CO 795/72/8.

⁶⁹ Gladys Plummer, *Appendix V: The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 CO 859/1/9.

demands on how to run the girls' schools, school gardens failed to make the cut of priorities in Southern Nigerian girls' schools, revealing the striking difference between local realities and imperial fantasies.

While the school gardens at boys' schools served as vocational training for farm laborers, the girls' school gardens functioned more like wife-training. Vocational training dominated African male education since the majority of state employees were African men. Vocational training for African girls and women, and the traditional education subjects of math science it entailed, lagged far behind but began to have some advocates by the 1930s. Practical subjects edged out traditional subjects like math and science in the 1930s because British administrators and policymakers were more interested in using African female education to improve household conditions, including nutrition, than in providing African women with credentials and jobs working for the state.

The employment statistics put this preference into sharp relief. For example, in 1927, there were 140 male and 29 female Nigerian nurses. By 1939, there were 167 female nurses, although they were still outnumbered by men by about two and a half to one.⁷⁰ These numbers revealed both the increase in women's vocational training and employment throughout the interwar period as well as how rare it remained even by the end of the decade. So few jobs were open to African women that British education did not seem like a good deal either to them or the families who would help send them to school. With little African interest in female vocational training, there was little traditional education to prepare them, which disqualified vocational training as an

⁷⁰ Denzer, *Women in Government Service*, 10-11, 16.

important site of nutrition education. While “in isolated cases,” in Uganda, for example, African female students showed an “active interest... in dietetics and the arrangement of a balanced menu,” for the most part, they were more interested in domestic science for its broad and immediate applications.⁷¹

Colonial state and education policymakers’ choice not to provide adequate female education for female employment “demonstrate[d] the process of institutionalizing women’s unequal opportunity in one area of the colonial economy.” British employers justified hiring few women because they believed prospective Nigerian husbands would not approve, even though traditionally Yoruba wives were expected to financially contribute to the household and increasing numbers of elite Nigerian parents sent their daughters to British schools.⁷² If domestic science education did not train Nigerian women for jobs, then the priorities of colonial education policy lay elsewhere: with reinforcing traditional British middle-class home life and with ending malnutrition. The growth of cookery education and dearth of vocational training made these colonial priorities clear.

Not to be entirely constrained by the colonial state, Nigerian women found other means of employment in an economic system increasingly stacked against them. In a cash economy where the majority of cash-paying jobs remained unavailable to them, Nigerian women used their domestic science education to sell cooked food and baked goods they made during class. Nigerian women had a long history of selling goods in their local markets. Under colonialism, the currency changed, price control shifted out of

⁷¹ Mrs. Cavers, *Report on Domestic Science Teaching in Uganda*, 1939 CO 859/1/9.

⁷² Denzer, *Women in Government Service*, 20.

women's hands, and women sold new and different European-inspired food. Despite these changes, Nigerian women used domestic science to whatever advantage they could to play up skills they traditionally practiced and roles they traditionally held. If the colonial state hoped to reinforce traditional British gender roles through domestic science, Nigerian women used domestic science to continue to survive under colonialism.

In response to a British advocate of vocational training, one colonial educator stated, "there seems to be a tendency to take it for granted that the education of women is given in order to provide teachers, nurses, and other officials under government. Surely education has a much broader aim than this...the purpose of education is to develop a fuller life for the women of Africa..."⁷³ Proponents of traditional education were more likely to take the long view and argue that the best way to combat malnutrition through female education was to equip African girls with a holistic curriculum. A broad foundation of knowledge and skills, the traditional education logic went, would give African women the tools to run their homes and feed their families efficiently. The inclusion of both traditional and practical subjects at the girls' school, and the continual addition of yet more practical as well as traditional subjects, illuminated the discord underpinning a colonial education policy that was anything but streamlined and unified.

Even advocates of practical education could sometimes admit its downsides and support the inclusion of some traditional subjects. For example, Plummer wanted to encourage students to grow kitchen gardens, but felt there was no time because they had to teach reading, even in marriage classes. Usually, Plummer acknowledged, she was on

⁷³ Gibson, *Notes on the Memorandum on the Education of African Communities*, 1940 CO 859/1/9.

a “crusade” against traditional education subjects such as literacy, but “it is perhaps too easy for those who come from a country of compulsory literary education to preach the gospel of practical education.”⁷⁴ In lightening up on her “crusade” against traditional education to teach literacy, even at the expense of the lauded school garden, Plummer acceded to what Africans demanded most out of African female education.

Ultimately, the debate over practical versus traditional education highlighted the contested nature of various pedagogical philosophies and the limitations of colonial rule. Lofty education schemes such as the school garden remained spare on the ground. British teachers’ anxiety over practical education also highlighted how much the British had yet to learn as they looked to anthropologists, sociologists, and their own students to learn African cookery before they could teach it themselves. More successful schemes such as the Kudeti cookbook still revealed the challenges British educators faced and their critical reliance on local African knowledge to advance their nutrition education goals. Finally, education policymakers not only disagreed with each other, they also struggled to appease African students and their families.

Africans Create the Kind of Classroom They Want

Africans themselves played active roles in shaping African female education. Like the British, Africans also disagreed on nutrition science pedagogy. Africans of different generations, genders, and classes held competing visions of the kind of education they wanted African women to receive, and thus had competing visions of domestic science curricula. While rural Nigerians remained skeptical of British education

⁷⁴ Gladys Plummer, *Appendix V: The Progress of Domestic Subjects Teaching in Southern Nigeria*, 1939 CO 859/1/9.

in general, elite Nigerian families sought to take advantage of the opportunities it provided within the colonial system. Older Nigerian women tended to resent and feel replaced by British domestic science education, while younger Nigerian women were more likely to try to work within the colonial system to find new ways to advance. Prospective husbands might be drawn to the status-marker of a wife who could speak English, but chiefs tended to strategically side with the more domestic goals of the colonial state. Depending on one's own social position and notions of what future generations of African women should be like, Africans from different walks of life contributed different arguments to domestic science pedagogy debates.

African parents comprised one of the most vocal groups in support of traditional education, both in Tanganyika and across the African continent, including colonial Nigeria. Nigerian parents tended to be skeptical of western education in general, and practical western education in particular. While the British largely wrote off older Nigerians' distrust of western education as a product of superstition and backwardness, African parents had good reasons to be suspicious. Nigerian parents had three main reasons to object to sending their daughters off for a westernized state education. First, sending their children off to school, either boarding school full time or to school Monday through Friday nine to three, did not leave much time for the children to help with taking care of the home, harvest, and village. Even if parents were interested in a British education for their child, that interest seldom overrode the importance of managing daily life, especially when having as much help as possible ensured a better harvest, which ensured better nutrition for rural Africans. Second, the British state education system acted as yet another means of marginalizing older African women and restricting their

traditional modes of access to power. Under the British education system, all but a very few elite African women were excluded from the occupation of teaching, putting the next generation of Nigerians' education in the control of the British. Third, Nigerian parents much more eagerly sent their sons to British schools because vocational jobs for men paid well and were in high demand throughout the early twentieth century. Vocational jobs for African women opened up much later, with the process gradually beginning in the interwar period, and thus the incentives to send girls off to school were murkier.⁷⁵

Nigerian mothers taught their daughters homecraft through leading by example, a strategy which had been suitably effective in Nigerians' eyes since before the British colonized Nigeria. Most parents did not appreciate the disruption that British colonialism brought to their lives, and wanted their children to stay home and help run their homes and villages. If Nigerian parents advocated a western education at all, they were far more likely to agitate for traditional education. One of the biggest concerns about practical domestic science education was that "the parents seem to think that laying emphasis on domestic science in the school curriculum is equivalent to training girls to become domestic servants."⁷⁶ At best, Nigerian parents felt that practical domestic science education was redundant; at worst, they feared it set their daughters up for a lifetime of servitude, not advancement. African parents who wanted a western education for their children knew that traditional education, particularly English literacy, would be the ticket

⁷⁵ Denzer, "Domestic Science Training in Colonial Yorubaland, Nigeria," 120.

⁷⁶ *Female Education in the Colonial Empire*, 1939 CO 859/1/9.

to social advancement. Westernized, elite Nigerian parents in particular sent their daughters to British schools to consolidate the family's elite status.⁷⁷

Only a small slice of the African population strongly desired a British education for themselves or their children. Of those, most wanted a traditional rather than practical education because that led to more immediate social and economic advancement. British education policymakers wanted to work with parents in education decisions but found themselves frustrated by both African resistance to practical education and difficulty “imbibing new-fangled ideas,” each of which they perceived as African backwardness.⁷⁸ Occasionally, however, Nigerian parents and British officials overlapped in their perspective on domestic science students.

African parents and British officials overlapped on their desire to keep westernization in female education to a minimum. Like the British, Nigerian parents did not want their daughters to become too western and too educated to the degree that they abandoned their communities and their parents' language and recipes. The average Nigerian parent wanted their daughters to have the best of both African and British homes, in which their daughters' routines remained mostly African but with the addition of more English language and western sanitation.⁷⁹ British officials also feared that too much western education would alienate domestic science students from other Africans, lead to social breakdown, and then colonial revolt. For these reasons, British teachers,

⁷⁷ Denzer, “Domestic Science Training,” 123; *Annual Report on the Education Department for the Year 1934*, Nigeria, 1935 CO 583/205/4.

⁷⁸ *The Present Position of Education in Africa*, 1939 CO 859/1/9.

⁷⁹ Denzer, “Domestic Science Training,” 122.

like Nigerian parents, sought to strike a balance between practical African lessons and traditional English literacy for what they saw as the sake of African social stability.

Nigerian parents' and British officials' goals also overlapped in their aim to keep African girls under their respective control. At one Nigerian Girls' Boarding School, the students successfully grew, cooked, and sold so much food for cash that the school became self-sufficient, no easy task in a time and place where schools often struggled financially. Domestic science students' hard work and baked good sales were encouraged by both parents and British administrators, but only up to a certain point. Financial independence risked putting the school outside of the bounds of official control and putting the girls outside of their parents' control. Nigerian parents and British colonial officials wanted domestic science students to learn western norms without becoming too westernized, to get their education without becoming too educated, and to be successful but not so successful that they no longer had to follow the rules of their parents or the state. For example, an African male contributor to the conservative *Nigerian Pioneer* wrote that "much learning only became a few women," meaning that most women should be preoccupied with their families, not education or a career.⁸⁰ In this regard, both parents and British officials sought to tailor African girls' education without significantly challenging their own power over African girls.⁸¹

British administrators and teachers knew that African parents, especially mothers, played an important role in female education. If the British wanted to achieve their revolution through familiar structures, teachers knew that it would be crucial to have the

⁸⁰ *Nigerian Pioneer*, March 5, 1926, cited in Denzer, "Domestic Science Training," 122.

⁸¹ Denzer, "Domestic Science Training," 119, 122.

support and cooperation of older African women. Even though Plummer claimed that “older women are often ‘set’ in their ways” she also tried to make a good-faith effort at incorporating their methods into the classroom as well. For example, speaking about domestic science students and the material they learned in class, Plummer said: “She should keep all the old methods and also learn new methods which will help her to improve on old conditions. Only in this way will the standard of home life improve.”⁸² Whether through adult education, women’s institutes, or syllabi with tribal input from mothers, British teachers and Department of Education officials attempted to cater to the traditional status of older African women even as they stripped them of their traditional places of authority by shifting education from African elder women’s task to the responsibility of the state.⁸³

In the eyes of administrators, both British and African women’s ignorance loomed as a root cause of malnutrition and their education stood as a key solution to improved nutrition. Britain integrated nutrition education into a robust system of primary, secondary, and post-secondary education. In Africa, administrators, teachers, and students debated the best means to conduct women’s education. Colonial teachers’ British domestic science training informed their work in Africa but had its limits as they responded to local desires and conditions. Rural African parents remained largely skeptical of the radical disruption that British education meant to their families and daily lives, while elite African parents pushed for British education to consolidate their families’ elite status. With these numerous, competing visions for the purpose of African

⁸² Plummer, *The Teaching of Domestic Subjects*, 9, 32.

⁸³ Audrey Richards, *Notes on the Education of African Communities*, 1939 CO 859/1/9.

female education, different groups lobbied for more practical or more traditional domestic science education, rendering domestic science pedagogy as a site of struggle for control over African women's social and economic position.

African men from different parts of society each stood to gain or lose something different from a more educated female populace. Rural African fathers generally preferred keeping their daughters at home to sending them off for formal British education while wealthy, elite African fathers sent their daughters to the British schools that had allowed their fathers to become wealthy. Chiefs, in cooperation with British colonial administration, had a vested interest in working with the Department of Education specifically. African men had their own takes on how they envisioned the education of the next generation of African wives. Tension between African men of different social standings, between African men and women, and between Africans and the British added another layer to the debate over what African girls should be taught and why.

A medical doctor recalled when she heard a man she described as an "educated African delegate" give his view at an international education conference. She quoted him as explaining to the conference attendees that "we want our girls to be educated, but when you educate them, they will not marry us."⁸⁴ According to the doctor, his remarks made the rest of the conference-goers laugh, but she took his comments seriously as an indication of the type of social breakdown the British were anxious to avoid. The doctor's

⁸⁴ Blacklock, *Certain Aspects*, CO 885/67.

fears reflected wider concerns that overeducated African women would not value marriage and motherhood.

While the conference attendees laughed at their colleague's complaint, British administrators and educators generally took seriously African men's concerns over African women's education. For example, the foreword of a popular African domestic science textbook, written by the Nigerian Medical Officer of Health, revealed British state, medical, and educational awareness of African men's priorities for African female education. In the foreword, the officer claimed: "I sincerely hope that any girl who reads and digests the subject matter of this book will apply her knowledge to maintaining a healthy and happy family and a contented well-fed husband."⁸⁵ The British administrator's desire for African husbands to be both happy and well-nourished spoke to the British concerns of social cohesion and improved nutrition. The popularity, among both British and African people, of marriage training schools, further demonstrated that African husbands occupied a central role in female nutrition education goals. Marriage-training schools trimmed away any subjects considered nonessential to being a wife and mother, making the curriculum all about a future husband's needs and wants. These schools, being more numerous, geographically closer, and less time-consuming, constituted a popular, more feasible choice. In using marriage-training schools as a vehicle for nutrition science education, the British colonial state rendered the wifely duties of feeding one's husband into a means of protecting the stability of the colonial

⁸⁵ Plummer, *About Your Food*, iii.

state by preserving tribal cohesion and bolstering the state goal of improved colonial nutrition.⁸⁶

Other African men, however, complicated this notion of African wives' desirability deriving from a practical education. Nigerian Annual Education Reports, where they mentioned female education at all, fretted about how "literate girls command a higher bride price,"⁸⁷ which led to a higher demand, from both men and women, for traditional education. African men wanted a wife who knew how to cook and clean, but those requirements were par for the course. A wife who could read and write English, on the other hand, would serve as a status-marker worth investing in. Nigerian men's desire to have a literate wife impacted the education of African girls and women as British teachers responded to pressure to include more literacy alongside domestic science lessons.

African chiefs had their own perspectives on what was best for African female education. All male, chiefs mediated between British educational policy and local African opinion. Working with and paid by the British colonial state, chiefs tended to share similar goals with the British when it came to education policy, and they had the power to both contribute to and sign off on British domestic science syllabi. Chiefs used their position of power to advocate for practical education. In addition to British experts, "the chiefs were pleased that the girls should be taught to look after the house, to cook and to till the fields and insisted that they should not lose these habits through too much

⁸⁶ Denzer, "Domestic Science Training," 126-7; Memorandum on the British Education of African Communities, 1935. CO 859/1/9.

⁸⁷ *Annual Report on the Education Department for the Year 1934*, Nigeria, 1935 CO 583/205/4.

book-learning.”⁸⁸ Like many rural African parents, chiefs worried that anything other than a practical education on how to be a good wife would grant African women too much independence.

Apart from westernized elite African men, in general, African men stood the most to gain personally from African women receiving a practical nutrition education. Chiefs and British administrators hoped that practical education would preserve African social cohesion by ensuring that African women did not receive so much education that they eschewed marriage and motherhood altogether. One African male contributor to the *Lagos Daily News* feared that too much education would make Nigerian women “useless.”⁸⁹ As Denzer elaborates, other male contributors to the paper

stressed that the ‘right’ type of Western education should produce a Christian woman, articulate in English, capable of applying selective modern ideas concerning hygiene and consumption, but who still remained basically African in her attitudes and behavior toward parents, husband, children, and the home. A woman’s life should revolve around the home and family, no matter what her status or level of education.⁹⁰

Marriage-training schools put African men’s needs front and center by emphasizing cookery skills. British teachers hoped that those cookery lessons would be enough to encourage African wives to cook more nutritious meals for their husbands and family, thus spreading improved nutrition to the rest of the population. Literacy, however, continued to be a popular, in-demand skill that women wanted and men wanted their wives to have. As with every corner of colonial Nigeria, African men had numerous,

⁸⁸ ACEC Subcommittee on the Welfare of Women and Girls, *Summary Proceedings on the Education of African Women*, 1931 CO 859/1/9.

⁸⁹ *Lagos Daily News*, April 18, 1928, cited in Denzer, “Domestic Science Training,” 122.

⁹⁰ *Lagos Daily News*, cited in Denzer, “Domestic Science Training,” 122.

conflicting input on women's education that contributed to making the African domestic science classroom a contentious colonial space.

Colonial administrators opted to prioritize women's education to end malnutrition and experimented with domestic science pedagogy to tailor and perfect that education. With different goals in mind, African women used the space of the domestic science classroom to learn about subjects that interested them more than nutrition science: European cookery and pastry-baking. In response to this increased state attention on their education, young Southern Nigerian women used the space of the domestic science classroom to gain expertise in subjects that served their interests. As Elizabeth Schmidt argues in *Peasants, Traders, Wives*, Shona women of Zimbabwe struggled to retain "control over the products of their labor" as money and power became increasingly "concentrated in male hands."⁹¹ In a similar pattern, the introduction of a cash economy under colonialism increasingly marginalized Nigerian women from an economy in which they had traditionally been driving members.⁹²

As a result, the younger generation of Nigerians saw that the colonial economy increasingly cut off Nigerian women to traditional modes of power. They devised strategic responses to that challenge and found new ways to access the cash they needed to live. Pursuing this strategy meant working within the colonial system rather than against it by finding new ways to access power in ways that were visible to the colonial

⁹¹ Elizabeth Schmidt, *Peasants, Traders, and Wives: Shona Women in the History of Zimbabwe, 1870-1939* (London: Heinemann, 1992), 4.

⁹² Aderinto, *When Sex Threatened the State*, 53; Kamene Okonjo, "The Dual-Sex Political System in Operation: Igbo Women and Community Politics in Midwestern Nigeria," in Nancy J. Hafkin and Edna G. Bay, eds., *Women in Africa: Studies in Social and Economic Change* (Redwood City: Stanford University Press, 1976), 55.

state. As Aderinto argues, by the 1920s, co-opting westernization became an “indispensable tool for modernization.”⁹³ These new ways included pursuing a career working for the colonial state as a nurse or teacher, using domestic science skills to earn a living, and marrying into the westernized Nigerian elite.⁹⁴

By 1939, out of 4,633 clerks working for the colonial Nigerian state, one was female. Wage-paying government jobs for Nigerian women remained few and far between before World War II, leaving some young Nigerian women to pursue another option: selling baked goods for cash.⁹⁵ Plummer herself recognized that Nigerian women needed other means of earning money in an economic system increasingly stacked against them. She used her position as Superintendent to create a domestic science education system that would provide more options for young educated women than simply teaching and nursing.

As a result, young Nigerian women used their domestic science education to sell cooked food and baked goods they made during class. Nigerian women had a long history of selling goods in their local markets; doing so via domestic science class carved out a new avenue to financial security based on older traditions. For example, the advanced class at the CMS Girls’ School in Ibadan opened up a shop to sell cakes and jams that they made. These businesses proved popular with both European and Nigerian clientele and could be quite lucrative. Domestic science students across Nigeria commonly sold the food they made at the schools. In tangent with the girls’ schools, the

⁹³ Aderinto, *When Sex Threatened the State*, 59.

⁹⁴ Okonjo, “The Dual-Sex Political System,” 48.

⁹⁵ Denzer, *Women in Government Service in Colonial Nigeria, 1862-1945* (1989), 16; Plummer, *About Your Food*, 35.

YWCA offered its own classes on cookery and baking to provide women with skills to earn a living under the new economic system.⁹⁶ Under colonialism, the currency changed, price control shifted out of women's hands, and women sold new and different English-inspired food. Despite these changes, Nigerian women used domestic science to whatever advantage they could to play up skills they traditionally practiced and roles they traditionally held.⁹⁷

Selling cakes helped Nigerian women access the money they needed to contribute to their households as they wanted, but that was not the only way domestic science advanced their aims. In general, Africans preferred the British imports of cakes, jams, and sweets to the more boring British import of nutrition science education. Not only did they taste good, the knowledge of these British recipes and how they fit into teatime rituals comprised important status markers for African elites. British desserts remained more popular than British meals, for reasons that one British teacher explained: “while girls liked to learn European cookery—which was regarded as a superior subject—they certainly did not wish to consume the products. Our soups, meat dishes, and puddings were tasteless and unattractive to them. Bread and cakes, on the other hand, were extremely popular...” Now that British teachers were clearing extra space in their syllabi for cookery, ambitious African women seized the opportunity to learn the kind of cookery they needed to marry into the elite.⁹⁸

⁹⁶ Denzer, “Domestic Science,” 129.

⁹⁷ Okonjo, “The Dual-Sex Political System,” 46, 76.

⁹⁸ Kristin Mann, *Marrying Well: Marriage, Status and Social Change among the Educated Elite in Colonial Lagos* (Cambridge: Cambridge University Press, 1985), 78.

Incorporating this type of cookery education into domestic science programs did not sit well with the British. Discussing education that was neither practical nor traditional, a colonial teacher described how some West African domestic science classes taught “English suburban respectability” in which there was no “honest acceptance of the girls’ own environment and needs.” She argued that this mindset was because African men wanted a European-educated wife who “could pour out tea when a European came to visit them.”⁹⁹ In these classes, nutrition science had morphed into something almost unrecognizable as either nutrition or science, which was a problem for educators whose goal was to teach that subject in order to reduce malnutrition.

These classes did, however, reveal a disconnect between what Africans wanted out of their education and what the British believed they wanted out of their education. Improving nutrition through education was a British project, but sometimes Africans had other ends in mind. While the colonial educator above did not think these classes met African women’s needs, some African women disagreed. A degree in what was essentially white English civility was exactly the ticket that ambitious Nigerian women wanted in order to rise into the Nigerian elite. Wealthy, westernized men wanted a wife who could keep a westernized home, not calculate how many calories were in a yam. For Nigerian women, classes on tea-serving and pastry-baking were the more strategic choice for their goal of marrying up.

Since, as the Superintendent herself fretted, “women cannot be forced to attend a class, the teacher must, to some extent, follow her pupils’ lead,” African women used

⁹⁹ Advisory Committee on Education in the Colonies, Subcommittee on the Education and Welfare of Women and Girls, *Minutes of the Second Meeting*, 1939 CO 859/1/9.

domestic science lessons as a strategic avenue to cultivate the kind of education that they wanted.¹⁰⁰ Even the Kudeti cookery book reflected this negotiation between British and African nutrition education goals: not only did the cookbook feature an entire section on English cookery for African kitchens, that section was written by the African author, not the British one. The Kudeti cookbook illustrated both the British attempt to deliver practical nutrition information and the African attempt to learn more prestigious English recipes, reflecting the broader negotiation between educators and African women over nutrition education.

Conclusion

African girls' and women's nutrition education acted as a site of negotiation both among and between British and African people of various backgrounds. The type of education African girls received would shape what the future of Africa would look like, which both British and African people were significantly invested in. To enact the colonial goal of improved nutrition through female education, British colonial administrators and British women already on the spot called for white women's increased involvement in shaping African female education. White women's burden took on new dimensions as white women took over the planning and execution of African domestic science education. As educators and policymakers set out to design a new African domestic science pedagogy, British teachers looked for ways to teach improved nutrition without teaching subjects that would foster a desire for independence. As a result, the African domestic science classroom became a site of pedagogical experimentation with

¹⁰⁰ Plummer, *The Teaching of Domestic Subjects*, 62.

different schemes such as school-communities, school gardens, and cookery books as new means of practical education. Ultimately, Africans used their ability to vote with their feet to have a say in the type of education African girls and women received. Elite Nigerians advocated for more traditional education such as literacy to provide more economic opportunities for their daughters. Playing an active role in their own education, Nigerian women themselves found opportunities to create the kind of education they decided would serve themselves most strategically in their goal of marrying into the elite. Nigerian women found ways to turn the lemons of colonial nutrition science education into the lemonade of elite European cookery education

Chapter 4

Sugar and Spice and Everything Nice: Character as a Central Tenet of Domestic Science Education

If cleanliness is next to Godliness, food hygiene also put its practitioner in close proximity to a host of religious and secular values in interwar British Africa. While the material reality of budgeting, grocery shopping, and food preparation occupied an important space in domestic science curricula, so did the less-tangible subject of character-building. Colonial education policymakers and teachers placed great emphasis on the importance of cultivating morality through nutrition education. The good character or good morals that British educators advocated emerged both from the state's goal of improving nutrition by improving labor efficiency and from older Christian mission values.

As Megan Vaughan's *Curing Their Ills* argues, the British perceived the root of African disease as moral rather than material. Colonial anthropologists, since the turn of the twentieth century, predicted the disintegration of African society as a result of the drastic economic and social changes wrought by colonialism. These predictions did not necessarily seek to challenge colonial rule but rather to counsel it wisely—anthropologists used their expertise to recommend the right type of colonial governance to prevent the kind of social decay that they theorized was making Africans sick.¹ Lugard himself sought to avoid the “breakdown of tribal authority” and “wholesale race deterioration” he feared would happen in Africa without careful leadership that slowly

¹ Henrika Kuklick, *The Savage Within: the Social History of British Anthropology, 1885-1945* (Cambridge: Cambridge University Press, 1993), 183.

ushered African society into a new colonial era.² Acting within this context, British educators thus targeted the perceived decay and degeneration of African society, not empire-engineered African poverty, in their domestic science learning objectives. In the domestic science classroom, British teachers largely understood malnutrition as a moral disease. The cure for malnutrition caused by moral deficiency, according to British education policymakers, was building character.³

While Vaughan draws a distinction between missionary medicine's emphasis on the individual and state-run medicine's focus on the collective, this chapter draws a connection between the two. Building character in African girls and women through domestic science education targeted individuals in the hopes of ultimately curing all of African society. As African domestic science education remained a team effort between mission and state methods, the specific goal of character-building emerged as a product of both mission and state ideologies.

The emphasis on good character also revealed the racism that underpinned colonial education policy. British educators insisted that African students needed to be taught to work harder, quicker, take more responsibility, and have more self-discipline because they believed Africans did not work hard, quickly, take enough responsibility, or have adequate self-discipline. This British goal of inculcating good character in African girls via domestic science education emerged as a product of both state and mission

² Lugard, *Dual Mandate*, 551, 600.

³ Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Redwood City: Stanford University Press, 1991); Kuklick, *The Savage Within*, 184.

thinking, characterized by racism, with the intention of ending malnutrition caused by tribal breakdown.⁴

The bitter twist of character-building as an official strategy of improving the health of Africans was that, scientifically, malnutrition was the cause, not the result, of the negative African character traits that the British perceived. For example, as a 1937 Ugandan Nutrition Report revealed, the average Ugandan seemed to possess a “somewhat listless mentality” and a poor diet. By contrast, the family who was “by far the wealthiest [with the healthiest diet]...all seemed happy and alert.” The report continued, “the mental alertness noted in [that] family might be taken as a warning against conclusions based on intelligence tests carried out amongst less fortunately situated Africans.”⁵ While this report drew the connections between income level, malnutrition, and lack of mental clarity, the overall British approach to character-building maintained that instruction in good character would mend the social ties that bound African society, which would in turn reduce African disease, including diseases of malnutrition.

This chapter seeks to make three main points. First, it argues that the concept of character encompassed a range of ambiguous qualities under one large colonial umbrella. Meshing Victorian mission virtues with more modern state goals, character typically included qualities such as personal responsibility, self-discipline, and being an efficient worker. Fostering these qualities served as an official goal of colonial education, featuring prominently in foundational colonial education texts, syllabi, and education

⁴ Vaughan, *Curing Their Ills*, 53, 57.

⁵ Report from the Governor of Uganda, February 1937. CAB 58/200.

reports. African female students' character served as a colonial priority on two levels. First, the state needed wives and mothers of good character to make well-nourished families who would go on to make healthy laborers for the colonial state. Second, by the 1930s, the colonial state hired increasing numbers of African women as employees, demanding their good character as part of their credentials as well. Next, the chapter argues that in addition to formal education documents, British experts tapped to work on the specific project of African female education also promoted character-building as an essential component of colonial education. Efficiency and good citizenship dominated discussions of character-building through education, revealing the priorities and prejudices of British education policymakers. Finally, the chapter argues that the character of domestic science teachers also mattered, but largely for different reasons than that of the students. The sort of character British domestic science teachers in Africa needed was a positive attitude to help them cope with the conditions of African kitchens. British domestic science teachers needed to be positive and upbeat in the face of being required to cook haute cuisine over an electric stove in Britain just to be qualified to cook porridge over an open fire in Africa. Trained and tested on one set of skills in the metropole, they required a new and different set, including a good attitude, once they arrived in their colonial classrooms.

African Morality as an Educational Goal

As education policymakers struggled to agree on teaching styles and courses, they had an easier time agreeing on a less tangible subject: character-building. The question of character came to dominate discussions of women's domestic science education. Mission and state education experts alike argued for the importance of building the character of

their students to mold them into efficient workers. If teaching African women domestic science provided them the skills to feed their families properly, it was thought, teaching them good character instilled in them a desire to do so. While each educator, administrator, and policymaker operated under their own particular definition, several defining features of character emerged from their discussions. Ultimately, education experts perceived ignorance and laziness as the roots of African women's shortcomings as homemakers, an unsurprising conclusion after centuries of racist colonial thinking. Official state documents, including Department of Education-approved syllabi and annual education reports, formalized the importance of character as a central goal of colonial education, while state and mission teachers alike carried out that goal in the classroom.

Their solution, then, was to instill in their pupils what they held as the virtues of middle-class British housewives: self-sufficiency and self-discipline. How the British defined good character emerged from over a century of Christian mission work, empire expansion, and increasing government involvement in people's everyday lives. As one empire historian described, "the term 'English character' is used, of course, merely as a convenient shorthand for an untidy bundle of thoughts and feelings..."⁶ coming out of Victorian religious and governing ideologies. Since the nineteenth century, mission education had consistently emphasized good morals alongside the practical skills imparted by industrial education. Since spreading the Christian faith underpinned the

⁶ Kathryn Tidrick, *Empire and the English Character* (London: I B Tauris & Co Ltd., 1990), 1.

whole enterprise, teaching African women to be good Christian wives and mothers had long been a mainstay of colonial education.⁷

Like the curricula, these morals were also overlaid by a layer of state priorities as the state took over more control of colonial education in the 1920s and 30s. Mission and state moral education overlapped considerably, especially with their emphasis on an individual's hard work and self-reliance, the state goal of colonial autonomy writ small. As other scholars have pointed out, state and mission goals in interwar West Africa could be virtually indistinguishable as they worked in tandem to revamp the colonial education system.⁸ The state had additional economic concerns that it did not share with the missions, however. On top of the mission project to teach Christian morality through education, colonial state education policymakers and teachers came to focus on the creation of efficient laborers, employees, wives, mothers, and in some cases, citizens. Women's efficiency and ability to take initiative foregrounded the discussion of domestic science curricula. As more state jobs opened up for African women in the 1930s, women's efficiency as state workers, especially as nurses and teachers, occupied a central place in domestic science classroom planning. As the colonial state increasingly prioritized women's nutrition education in the fight against malnutrition, women's efficiency as cooks for the current and future generations of agricultural laborers occupied that same prominent place in the discussions. Whether officially serving the state through compensated labor or unofficially serving the state by raising a well-

⁷ J.D.Y. Peel, *Religious Encounter and the Making of the Yoruba* (Bloomington: Indiana University Press, 1993); Jane Haggis, "Ironies of Emancipation: Changing Configurations of 'Women's Work' in the 'Mission of Sisterhood' to Indian Women" *Feminist Review* 65 (2000): pp. 108-126.

⁸ Jean Allman and Victoria Tashjian, *I Will Not Eat Stone: A Women's History of Colonial Asante* (London: Heinemann, 2000) xxxiv.

nourished family, African women's good character, especially their efficiency, dominated state domestic science learning outcomes.

Character as a critical component of domestic science education appeared in official colonial education policy texts. Notably, Lugard's 1922 *Dual Mandate*, a foundational text for the educational changes of the interwar period, embodied the amalgamation of Christian ethics and state-defined morals. Lugard insisted that the "primary object of all schools should be the formation of character and habits of discipline" across the empire. If this type of education was important in Christian regions, he implored, "how much more necessary is it in Africa, where, as a rule, such [Christian] influences are absent[?]"⁹ Lugard followed with a litany of good habits that fell under the umbrella of character that colonial education would impart, which included "self-control...thrift, ambition, and initiative...justice, fair play, truthfulness, and mutual obligation..." He did "not for a moment mean to infer that there is a complete lack of such qualities among Africans... but they are generally undeveloped, and are not enforced by the public opinion of the community, and lack the sanction of local custom." Furthermore, he explicitly laid out the importance of African women's character, asserting that "the immense value to the educated youth of Africa, of having wives who can share their thoughts and sympathize in and understand their work, is only less important than the influence which the mother should exert in forming the character of her children."¹⁰ As both wives and mothers, African women's good character would form the bedrock of an industrious and profitable African colonial future.

⁹ Lord Frederick J.D. Lugard, *The Dual Mandate in British Tropical Africa* (London: William Blackwood and Sons, 1922), 431.

¹⁰ Lugard, *Dual Mandate*, 457.

After Lugard, the 1925 British Education Policy in Tropical Africa echoed these themes. The Memo asserted that “the first task of education is to raise the standard alike of character and efficiency of the bulk of the people.” The 1935 Memorandum on the Education of African Communities reproduced that statement and reaffirmed that British African education policy remained as committed to that ideal in 1935 as it had been a decade prior. That memo went on to insist that British educators “must encourage African initiative, self-help, and responsibility.” In general, African character-training meant inculcating students with the qualities British governors, traders, and farm-owners wanted their workers to possess. In the particular case of domestic science, African women’s character-training entailed feeding cheap, nutritious meals to those workers.

In addition to the *Dual Mandate* and the education policy memos, annual education reports and syllabi also rendered explicit the link between morality and domestic science, formally establishing moral welfare and character development as critical learning outcomes. While the memos laid out a general, top-down policy for African education, character development’s appearance in individual colonies’ reports and syllabi revealed the local importance of character-training. Education Department Reports in the 1920s and 30s from Nigeria to Nyasaland included a special heading to address the “Physical and Moral Welfare” of African students in both mission and government schools. For example, the 1931 Ugandan Annual Report from the Education Department stated that even “[i]n all Government schools special hours are set apart for religious instruction, and arrangements are made with the missions for the necessary teachers.”¹¹ Even secular-run schools provided religious instruction because the moral

¹¹ Uganda Education Department Annual Report, Government Printer, 1932 CO 536/173/17.

imperative for good Christian women to feed their families nutritious food linked morality to domestic science education and vice versa.

In Nyasaland, the Education Department-approved 1933 domestic science syllabus included “religious and moral instruction” as well as mothercraft, including “the study of the child’s development, physical, intellectual, and moral.” British domestic science curricula designers presumed that each pupil would grow up to be a wife and mother, the moral center for the whole family. It was important to domestic science teachers to provide proper moral instruction to their students since, like proper nutrition, good morality supposedly radiated outward from African women to their families to the entire community. The 1931 Annual Report asserted that “religious instruction is not confined to the daily period allotted to it in the timetable; almost every subject is taught and illustrated by reference to it.”¹² The Christian mission goal of teaching African girls and women how to be good Christian wives and mothers permeated their lessons on domestic science; good nutrition and Christian morality became mutually constitutive subjects because good, moral women fed their families nutritious food.

British domestic science teachers presumed that all of their students would become wives and mothers. Throughout the 1930s, teachers increasingly assumed that their pupils might possibly become employees of the colonial state as well. In preparation for that possibility, the domestic science syllabus included a broad “Housewifery and Cookery” section. In the description immediately following that heading, the syllabus asserted that “the aim of these lessons is to teach household economics, hygiene and

¹² Nyasaland Annual Education Report, Government Printer, 1933 CO 525/146/1.

sanitation and generally to improve the standard of living and to make the girls quick and efficient workers” who became skilled in “the occupation of spare time” to be as productive as possible.¹³ Whether at home for her children or at a hospital for her patient, an African domestic science graduate needed both the knowledge of proper nutrition and the skills that cooking nutritious food imparted to be good at her job. In both cases, the colonial state had an increasingly vital interest in her ability to do her job well, whether informally as a wife and mother improving the nutrition of her family, or formally as an employee of the colonial state.

Ultimately, to create the kind of workers, whether as state employees or caregivers, that the state wanted, character-building became a central goal of colonial education alongside tangible skills. Coming out of a long context of mission education that combined industrial work, homemaking, and Christian teachings, state-mandated character-building was in many ways a continuation of an older colonial practice tweaked to suit state concerns more directly. A vague catch-all, character-building implied a host of various qualities that British teachers assumed to be the unique provenance of the English. As such, traits like self-discipline and the ability to take initiative became as important and formal a part of domestic science education as the physical act of cooking nutritious food.

The Character of African Students

Since British education experts consistently established good character as an educational goal in syllabi and reports, female students’ good character occupied a

¹³ Nyasaland Annual Education Report, Government Printer, 1933 CO 525/146/1.

central place in discussions of domestic science education. The special committee established to tackle African female education, as well as experts consulted specifically for the purpose of shaping that education, weighed in on the issue of character and domestic science. In addition to general suggestions for character-building, calls for increased efficiency and good citizenship characterized British education experts' discussions on domestic science education to improve the state of African female education and, thus, the state of nutrition.

Shortly after the foundational Phelps-Stokes Commission, the 1925 Memorandum "Education Policy in British Tropical Africa" articulated the interwar British vision for African women's domestic science education so clearly that educators continued to use it as their guide through the Great Depression and into the late 1930s. The memorandum contended that education should increase the "feeling of responsibility to tribal community," distinguish between truth and superstition, both strengthen what colonial educators determined was useful from African beliefs and replace what they decided was unhelpful, and reinforce the connection between moral instruction and daily life. African women's good character would ideally be "expressed in habits of self-discipline and loyalty to the community."¹⁴ Within the context of the educational goal of improving nutrition, the specific ideals included a desire to properly feed one's family nutritious meals through the everyday practices of running a home under the principles of European hygiene and nutrition science. Learning and using nutrition science in everyday homemaking was supposed to build character.

¹⁴ "Education Policy in British Tropical Africa," 1925 CO 859/1/9.

Reiterating these themes, Dr. Mary Blacklock's 1937 "Certain Aspects of the Welfare of Women and Children in the Colonies" drew explicit links between nutrition and good character. Blacklock, a doctor from the Liverpool School of Tropical Medicine who worked extensively across the empire, did not hold back in her "suggestions for improvement" in the condition of African women and girls' education and nutrition. She urged that "in all girls' schools in the colonies a considerable proportion of the time should be devoted to the ... formation of character." Within the context of her blistering critique of the colonial neglect of women's and girls' education and nutrition, her demand that colonial educators impart good character to their pupils via domestic science education sent ripples through education and agricultural departments across the African continent. She exhorted them to pay attention to "the development of character, of making the girls self-reliant, resourceful, and reliable," especially the ones in training to be nurses. According to the subcommittee, the practical skills of food selection and preparation made African homemakers better people, better mothers and wives, and thus better colonial subjects. In particular, Blacklock recommended that girls in "primitive" places need "school training in household management, in mothercraft and in character formation."¹⁵ Quoting another colonial educator, Blacklock continued by pointing out that "more progress in character and in domestic and agricultural work" was necessary for African women, since they were currently being outpaced by educated African men. The education, and thus character, disparity between the sexes, Blacklock feared, would divide the community. Educated African men more and more frequently sought equally-educated wives, and there was a shortage due to the colonial neglect of African women's

¹⁵ Mary Blacklock, "Certain Aspects of the Welfare of Women and Children in the Colonies," 1937 CO 885/67.

education. Moreover, the education these African women lacked was in the domestic science that educated African men felt they required in their homes after being instructed in the morality of applying western science to their daily lives.¹⁶

Blacklock was far from the only colonial observer concerned about the lag between African women's and men's education, its effects on both African society and home life, and how it pertained to African food habits. The subcommittee saw nutrition education as tying into broader issues of changing African society and food culture. Domestic science lessons not only taught African women and girls proper nutrition, but also proper character through the skills that cooking nutritious food imparted. The character that students were supposed to build in their domestic science lessons was supposed to breed a respectability expressed through proper food and qualities such as the ability to take initiative and work hard, whether as a wife and mother or as a nurse, midwife, or teacher.

At the Tabor Girls' School in Tanganyika, one of the biggest accomplishments by 1931 included the "acquisition of more self-reliance" among students, according to a British teacher there.¹⁷ By the end of the decade, the ACEC subcommittee's "The Present Position [of Female Education] in Africa" memo highlighted girls' boarding schools on missionary stations. The report explained that it was at these schools "where primary and occasionally post primary education is given and where character training and the formation of good habits are among the main objects of their education."¹⁸ Imparting the

¹⁶ Mary Blacklock, "Certain Aspects of the Welfare of Women and Children in the Colonies," 1937 CO 885/67.

¹⁷ ACEC Subcommittee on the Welfare of Women and Girls, *Summary Proceedings on the Education of African Women*, 1931 CO 859/1/9.

¹⁸ "The Present Position [of Education] in Africa," 1939 CO 859/1/9.

preparation of nutritious food became inseparable from the twin lesson of how to do so efficiently and with a good attitude. Finally came the ultimate test of western character: the ability to feel shame. Domestic science teachers were not above the occasional use of shame to motivate their students into better behavior. According to a British domestic science teacher in Northern Rhodesia, “on one occasion thirty women were taken to a dirty house and the crowd worked and shamed the occupier into cleanliness.”¹⁹ Those thirty women, students of the female domestic science teacher and wives of the male agricultural students, reinforced through their shaming ritual that proper domestic science habits were a matter of character and morality. A poorly-kept house with an ill-fed family constituted a moral failing. As such, morality and domestic science education remained interlinked.

Efficiency came up repeatedly as one of the most important qualities an African girl could cultivate through her schooling. The emphasis on efficiency at the level of the individual tied into the British conception of the overall educational and colonial systems more broadly. Efficient African wives and laborers made efficient colonial systems. In the domestic science education curriculum in particular, teachers needed to train their pupils to be efficient so that they would grow up with the skills to teach according to the demands of the colonial education system. In other words, they needed to be able to teach as many students as possible with a very limited budget.

The 1925 “Education Policy in British Tropical Africa” memo spelled out these concerns. It stated that “the greater efficiency which would result from this [education]

¹⁹ Northern Rhodesia Native Education Department Annual Report, Government Printer, 1934 CO 795/72/8.

system might be expected to compensate for any consequent reduction in the number of teachers which financial considerations might render necessary.” The memo went on to emphasize the importance of African efficiency as a crucial ingredient in the success of African education. The memo asserted that “the efficiency of school...depends on the extent to which it is able to cooperate with the moral forces operative in native society.” The ability to effectively educate entire African communities, however, also hinged on “reforms in the general habits of the community” to prioritize a western model of education. British education policymakers also advocated for “practical gardening” with “the staple crop plants of the district [because]... it will serve as a useful check on the efficiency of the work by permitting a comparison with neighboring farms.”²⁰ By putting adjacent villages and schools in friendly competition with one another’s farms and gardens, British teachers and agriculturalists hoped to maximize agricultural efficiency. This goal, in turn, would hopefully provide African yards and markets with more and cheaper nutritious food. Ultimately, the British state emphasized efficiency in its students in order to build entire colonial systems out of very little money and few resources.

If efficient farming and gardening would lead to improved nutrition, the British believed that the process worked the other way round as well. British education and agriculture policymakers knew that improved nutrition would lead to more efficient labor, which would lead to more agricultural exports and more money flowing into the colonies. These hopes, outlined previously in the first chapter, included African colonial governors and medical officers advocating for improved nutrition, which would “lead[...]

²⁰ Northern Rhodesia Native Education Department Annual Report, Government Printer, 1934 CO 795/72/8.

in time to increased strength and activity which might induce the farmers to throw off their lethargy and to cultivate both more extensively and more intensively than they do at present.” Audrey Richards bolstered these claims in her studies of the Bemba in Northern Rhodesia. She explained how “the diet of [one] village resembles that of Europe and America more closely than the diets of any of the villages previously discussed. The calorie value of the diet is of that order of that usually considered adequate for a man doing hard physical work,” as well as being a “more or less constant diet” that did not fluctuate with the seasons, as many other villages’ diets did. As a result, “the natives seemed...more energetic and better able to concentrate.”²¹ Her studies demonstrated scientifically that a steady diet with adequate calories, vitamins, and minerals, led to increased output of labor. Healthier agricultural laborers, colonial policymakers hoped, could produce greater quantities of healthier food, which would in turn continue to improve the nutritional levels of the colonies. For their part, girls’ schools took up the colonial clarion call for greater efficiency to do their bit in the cycle of efficient schooling, farming, and gardening.

British educators and policymakers occasionally floated the importance of good citizenship as an educational goal. Scattered references to the importance of Africans learning how to be good citizens revealed the state twist on the classic mission favorite of teaching good morals through education. As colonial governments became more invested in education, educational outcomes became more oriented toward state priorities and goals, including increased economic autonomy and increasing numbers of both male and

²¹ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Despatch from the Governor of Gambia*, 1936, CAB 58/199; Audrey Richards and Elsie Widdowson, “A Dietary Study in Northeastern Rhodesia,” *Africa* IIALC Vol. IX No. 2 (April 1936) CAB 58/199.

female employees of the British state. In addition to British educators' emphases on efficiency and self-discipline, sometimes citizenship entered the pedagogical discussion as well. Since British lawmakers and teachers did not discuss political independence, voting rights, or other means of challenging colonial rule, their use of good citizenship as an educational goal for African girls and women cannot be read as arguments for suffrage or other political rights. Instead, arguments in the context of teaching good citizenship to African girls became another way to support, rather than challenge, colonial rule. Good citizenship became another shorthand for all the qualities of English character that British educators aimed to impart through education. While the conception of citizenship in metropolitan Britain entailed earning the rights to participate in political life, the British conception of the model African citizen entailed using qualities such as efficient workmanship to serve the state, not to have a say in running it.

Mentions of citizenship appear early in the colonial state's increasing interwar interest in African education. Lugard's 1922 *Dual Mandate*, which set the tone for the interwar spirit of increased state intervention in colonial welfare, referenced the importance of teaching Africans how to be good citizens. In a paternalistic subversion of what Fanon would come to see as the necessity of decolonizing the mind, Lugard asserted that "[e]mancipation of the body is a lesser benefit than the emancipation of the spirit. It is not enough to set a man free from his legal status as a slave unless he learns his responsibilities as a citizen. That has been our aim in Nigeria," where Lugard served as a key architect in colonial education policy.²² Fifteen years later, with the nutrition survey well under way, the Committee on Nutrition in the Colonial Empire continued the

²² Lugard, *Dual Mandate*, 295-6.

theme. Linking nutrition and citizenship in Nigeria, the committee asked the Medical and Sanitary Services Director, “have you got any evidence that by carrying these [campaigns to improve nutrition] out you can make the people better animals or better citizens?”²³

The pressing question revealed their priorities in studying colonial nutrition. Without the right mindset, British education policymakers feared that African society—and export profits—would languish unless Africans learned not only the physical skills of farming and cooking, but also the attendant desire to do so efficiently and with a spirit of cooperation.

Good citizenship also figured into a 1931 Annual Education Report for Nyasaland. The Director of Education rather defensively stated that contrary to assertions that Christianity was weakening African society, “the Christian educationist stresses the duty of the citizen...humility...strict discipline...common courtesy...” Through enacting the values students learned via western education once they returned home in their native villages, “school becomes...a means of binding together the community by ties more potent than the old customs and beliefs.”²⁴ In other words, the Nyasaland Director of Education saw citizenship informed by Christian values as the solution to the decay of African tribalism and social breakdown, rather than the cause. Rather than serving as a marker of difference driving a wedge between Christian and non-Christian Africans, Christianity would, he hoped, eventually bring them all together. As the new glue that would bind African society together again, good citizenship imparted by colonial

²³ Economic Advisory Committee, Committee for Nutrition in the Colonial Empire, *Notes of Sir Walter Johnson, Medical and Sanitary Services, Nigeria, to Committee*, 1937 CAB 58/200. The officer could not definitively say yes or no, given the small scope of the campaigns.

²⁴ Nyasaland Annual Education Report, Government Printer, 1932 CO 525/146/1.

education became an even more important project to British educators anxious to keep African communities from falling apart.

These sources spoke in general terms of the African population, technically including African women but not engaging with their education specifically. Notions of women's citizenship were evolving in the metropole as well, so African women's citizenship training began to enter education planning discussions in the interwar period. By 1918, British women finally won the vote after nearly 70 years of agitation for it, claiming full citizenship rights at last. In Britain, women's struggle for the vote had been bound up in notions of race and empire since the nineteenth century, shaping the discussion of African women's citizenship in the interwar period.

The fight for women's suffrage heated up at the same time as the Scramble for Africa, a fact that suffragists exploited in their arguments. They connected women's suffrage to notions of empire. Sometimes they used the empire to illustrate their patriotic duty to racial uplift, and sometimes they used it as a means of drawing a distinction between civilized white women who deserved the vote versus colonial men of color whom they believed did not. *Common Cause*, a major British suffragist publication, painted women's suffrage as the "Eugenic Vote," with suffrage serving, as Antoinette Burton puts it, "white women's reward for empire-building" and serving Britain's national and imperial interests so dutifully.²⁵

The suffrage press encouraged its readership to "think imperially," and suffragists by the early twentieth century saw British suffrage as a "global sisterhood" in which they

²⁵ Burton, *Burdens of History*, 3, 50, 186.

would paternalistically pave the way for other women's path to citizenship. British suffragists remained mostly concerned with Indian women's plight. With a westernized, educated elite coming closer than any other nonwhite British colony to Home Rule, Indian women's suffrage occupied the most prominent place in discussions of suffrage around the empire. Colonial Africa entered these discussions from a different angle. For example, early twentieth-century British suffragists said of gender relations in central Africa: "'strange to say...their land is an Elysium of women's rights.' Husband and wife were equal, 'the women even do business on their own account.'" As a Dominion and settler colony, South Africa presented a slightly different case. One contributor to *Common Cause* argued that without women's suffrage, there was a "lack of 'adequate protection for our womanhood black and white' in South Africa." Under one government, the white author found common cause with her female compatriots of color.²⁶

With imperial conceptions of citizenship intertwined so deeply with race, African women's citizenship looked very different from British women's, relating more to good behavior than to political and legal rights. British women, having recently attained full citizenship themselves, made the paternalistic project of ushering African women into good citizenship their own project. This project included trying to figure out how to incorporate the subject into their education. For example, Audrey Richards urged "the importance of the training in citizenship" because the "old system... is bound to decay under modern conditions, and the European system of education has not always provided a substitute." Warding against that perennial colonial fear of tribal breakdown, Richards suggested teaching women how to be good citizens. According to Richards, this project

²⁶ Burton, *Burdens of History*, 171, 16, 175, 105.

would make colonial education more relevant to its students' lives and tackle one of the biggest concerns that colonial administrators had.

Female mission teachers also brought up the subject. For example, Miss Hake, a teacher at a girls' school in Tanganyika, wrote in 1930 that "gradually more subjects were introduced into the timetable, such as sewing, native pottery... studies in geography and plant life and citizenship."²⁷ Ten years later, another female mission teacher worried that opportunities for female students still lagged far behind those of boys, and wanted "to ensure that the girls have as good opportunities to get trained as efficient citizens and for any special functions they have to fulfil[sic] in the community as the boys have."²⁸ She hoped that the kind of training Miss Hake described could be guaranteed to girls across the continent, and as a member of the board in charge of female education, used her position to advocate for it.

Citizenship, efficiency, self-discipline, and initiative constituted some of the most important qualities that experts working on the specific project of African female education advocated. From a doctor with experience in working with colonial nurses, to an anthropologist studying kinship and daily life patterns, British female professionals who studied both paid and unpaid African female labor used their position as experts to promote character-building as an integral part of domestic science education. Within the broad context of character as a goal of colonial education generally, it also served as a central feature of domestic science specifically.

²⁷ ACEC Subcommittee on the Welfare of Women and Girls, *Summary Proceedings on the Education of African Women*, 1931 CO 859/1/9.

²⁸ Oakden, *Notes on the Education of African Communities*, 1939 CO 859/1/9.

The Character of British Teachers in Africa

To properly instill the right character in their African students, domestic science classrooms had to have the right kind of character in their teachers as well. Education subcommittee members made the character of the instructors at least as much of a priority as the character of the students, especially since it was common for domestic science teachers to “begin by making [their] own house a pattern for others to follow and thereby begin to teach by example.”²⁹ The Subcommittee played up the importance of character in the teachers not only because they needed to set a good example for their students, but also, and more significantly, because the harsh realities of participating in remote and underfunded programs demanded a positive attitude. For example, a 1933 Northern Rhodesia education report wanted to “continue training teachers for village school work and give them that special outlook which will fit them for the rural work which they must do.”³⁰ At the same time that colonial officials and teachers “on the spot” asserted that university-trained domestic science teachers were a must, they simultaneously asserted that no English training could truly prepare them for the reality of African domestic science teaching. Only possessing the proper character, or “that special outlook” could.³¹

The 1931 subcommittee interim report on domestic science teaching in Africa stressed the need for women teachers with a “strong personality...[and] vigor of mind.”³² The subcommittee members agreed that personality was even more important than formal education, especially for the “pioneer” female educator: while men in colonial

²⁹ “Health Propaganda Unit,” *Despatch from the Governor of Nigeria*, 1937 CAB 58/ 201.

³⁰ Northern Rhodesia Native Education Department Annual Report, Government Printer, 1934 CO 795/72/8.

³¹ Subcommittee Minutes of Second Meeting, 1939. CO 859/1/9.

³² Summary Proceedings on the Education of African Women, 1931. CO 859/1/9.

government and education had the privilege of following in other men's footsteps, female teachers and education department administrators cut new paths for white women in Africa. The right mentality for the weight of that responsibility, the committee urged, was more important than the right degree, although the right degree was still required.³³ Reiterating this notion, a 1934 Northern Rhodesian newspaper highlighted a quote from the annual education report that had just been released. The quote stated, "[u]nless there is enthusiasm, skill, art, and training on the teachers' part, there is ever present that besetting sin of incipient educational systems in Africa: humbug... The Native Education Department of Northern Rhodesia seems determined to banish humbug from its curriculum."³⁴ In other words, British educators identified what they saw as the biggest challenge to African education. More than language barriers, logistical issues, the material reality of impoverished African communities or deep colonial education budget cuts, the report blamed teachers' apathy, cynicism, or their unsupportive, defeatist attitude for the failure of colonial education efforts to take off. With the right can-do attitude, the Native Education Director believed that British teachers could overcome the rest of the challenges they faced to invigorate the colonial education system.

As Plummer described: "the first reaction of a trained domestic science teacher at the sight of a Nigerian cookery class is usually blank horror. Nothing less like our tidy little classes in England can well be imagined... [she will] have to cope with oil lamps and cooking by wood, and extremely primitive apparatus." After going on to issue the standard demand for a British university-trained domestic science teacher, Plummer

³³ Summary Proceedings on the Education of African Women, 1931. CO 859/1/9.

³⁴ Northern Rhodesia Native Education Department Annual Report, Government Printer, 1934 CO 795/72/8.

included some typical requisite personal qualifications, including a “sense of humor—otherwise the candidate will become neurotic and rapidly be invalided home, after becoming a complete nuisance in Nigeria.” She concluded by stating that teachers must be adaptable and willing to “scrap” the lessons they had in mind for what could feasibly be done with what bare bones kitchen facilities were available. She self-deprecatingly acknowledged how high the standards she put forth were, saying that in sum, “what we really want, I suppose, are a few female archangels with domestic science training.” Ultimately, Plummer hammered home that outstanding credentials from the best domestic science university in Britain wouldn’t matter if the candidate lacked the positive attitude she would need to cope. A degree in hand was the bare minimum standard to be considered for the job; possessing the right character was the deciding factor.³⁵

Colonial educators and policymakers stressed that colonial governments should carefully hire British women for African girls’ and women’s domestic science education. Finding the “right type of woman” in Britain, however, promised to be such a difficult task that some subcommittee members floated the idea of training African women in British domestic science programs. While not unheard of, African women’s enrollment in these programs was rare. In any case, the suggestion reveals the importance colonial educators placed on a program they also admitted could never fully prepare British teachers for African classrooms. It also revealed the importance they placed on the character they insisted was a prerequisite for the job, since they were willing and sometimes able to send African women to British domestic science schools.³⁶

³⁵ Replies to the Domestic Science Circular, Appendix V, 1937 CO 859/1/9.

³⁶ Subcommittee Minutes of Second Meeting, 1939 CO 859/1/9.

Ultimately, teachers' character mattered as much as students', though generally for different, additional reasons. While teachers needed to serve as good examples to their students, British educators on the spot generally accepted this point as an uncontroversial given. Instead, they emphasized the aspects of the job that they worried prospective domestic science teachers had not considered—the necessity of a positive attitude and ability to be flexible in radically different conditions from any they had faced. Even though women with domestic science degrees were in increasing demand in Africa by the end of the 1930s, a degree obtained in Britain did less to prepare its recipient than a positive, enterprising outlook would.

Conclusion

The British goal of using domestic science education to build character in African women was a creation of both state and mission thinking. With over a century of mission education combining skills with morals, this precedent made a smooth transition for the colonial state to add its values to the practice. Characterized by racism, British insistence that African women needed to cultivate self-discipline and be more efficient workers emerged from a mode of thinking that assumed African women lacked these qualities, rather than assuming they applied these qualities to their own priorities instead of the state's. Identifying the breakdown in tribal society and morals as a root cause of African disease and ill health, including malnutrition, British teachers looked to education to provide a new—white, western—moral code to fix the problem. While different colonial educators and policymakers may have disagreed on the best means of teaching nutrition through domestic science, they overlapped on the notion of using education to build the character of African women and girls. The emphasis on students' character ensured that

they became more efficient colonial subjects through the practical skills they learned. The emphasis on domestic science teachers' character illustrated that the practical skills imparted by a university education came second to the more ambiguous qualities of being a good model citizen to their African pupils and a spirited pioneer for future colonial educators. The focus on nutrition education-as-character-building placed the responsibility for solving the problem of African malnutrition on the shoulders of individual British and African women. By avoiding the bigger issues of the migrant labor system and cash-crop farming, colonial officials focused their attention on the micro-level of individual women's character, thus finding a way to have their cake and eat it too.

Conclusion

Currently, nations, NGOs, and charities choosing to focus on girls' and women's education as a form of foreign aid has become intuitive and unquestioned. This project shows the process by which this line of thinking unfolded. While this type of aid today exists in countless forms, some more beneficial than others, its origins were decidedly more paternalistic and its scope more limited. In interwar British Africa, focusing on female education indicated that the problem was African female ignorance. Education put the onus on the individual to solve the problem of malnutrition. At the same time, the emphasis on education allowed the structural barriers to affordable and accessible nutritious food, including high import taxes and prioritizing cash-crop farming at the expense of mixed farming, to go unchanged.

Ultimately, the process of focusing on female education as foreign aid began with the 1920s discovery of vitamins and minerals, which kickstarted a new wave of scientific and medical research that underpinned a global project to improve nutrition. As one of the most powerful players in that global context, the British Empire played a central role in that research. Undertaking an empire-wide survey into the state of nutrition, the Colonial Office focused its efforts on colonial Africa from the belief that the continent suffered from underpopulation due to malnutrition. Initially casting a wide net and remaining open to different solutions, the British state ultimately decided on two main courses of action to tackle the problem of malnutrition: increased scientific research and increased education, particularly women's education. These two solutions enabled the state to take action without disrupting a global system of food trade that saw large quantities of monocrops flowing from the colonies to the metropole on the cheap.

African female nutrition education took its cues from the metropole while adapting to local conditions on the ground. Comparing the facilities, degrees, courses, and exams of domestic science schools in London and Lagos reveals both the similarities and the differences in domestic science programs. While the syllabi and prospectuses of each school appeared similar in the written descriptions of their course materials and learning objectives, the material reality of the schools highlighted the differences. British teachers came to African domestic science classrooms armed only with their own personal experience of British domestic science programs and British-drafted syllabi and course texts. The end product, however, resulted in a hybrid British-African style of domestic science created from African desires to learn different subject matter and African styles of cooking and baking using African materials and cooking techniques, often to make English recipes.

Domestic science pedagogy, too, served as a contested arena, as various British and African groups lobbied for the kind of education they wanted African girls and women to have. Strikingly, despite radical changes in the imperial economy and the empire itself, pedagogy discussions remained relatively unruffled from the 1920s through the 1930s. Even in late 1939, educators held up 1920s pedagogical goals as the standard toward which they continued to work. Anxious to avoid creating a discontented educated elite as they had done in India, British educators toyed with two different types of pedagogies for African female nutrition science education. As the older pedagogical style, traditional education more closely resembled a British education, including reading, writing, math, and hard science. The newer, more experimental pedagogy, called practical education, entailed changing African daily life, including recipes, as little as

possible, only adding in minor changes based on nutrition science. By contrast, African students themselves lobbied for lessons on English cookery as a status-marker to help them marry into the elite. Different groups envisioned different futures for African women, and these visions informed the different types of education each group wanted African girls to receive.

While different pedagogies focused on the different ways of teaching nutrition science, the accompanying debates about instilling character through domestic science education reveal that colonial nutrition education was always about more than just nutrition for the British. British educators wanted to impart good character, including traits such as reliability and industriousness, to their African students through domestic science lessons. This belief that Africans lacked such qualities threw the racist paternalism of the project into sharp relief. Even British arguments in favor of teaching good citizenship to African girls became another way to support, rather than challenge, colonial rule. Despite this dynamic, domestic science students ended up using their education to subvert colonial rule anyway. By lobbying for classes on prestigious English cookery and literacy rather than the practical education on nutrition their British teachers preferred to give, they subverted the aims of colonial rule. In addition to students, educators also emphasized the importance of the teachers' character, but for different reasons. Teachers already on the spot worried that credentials alone would not be enough to help British domestic science teachers perform their jobs, and that the proper spirit of adventure would be necessary to cope with the realities of cooking in African kitchens. Whether in students or in teachers, British colonial educators fixated on building character as a key component of domestic science education.

Ultimately, domestic science did not ameliorate African malnutrition because having the knowledge of nutritious food only won half the battle. Knowledge alone did not make nutritious food become available and affordable to all Africans. Furthermore, colonial administrators remained unwilling to make the economic changes necessary to accomplish that goal, such as reducing high import taxes and increasing mixed farming. Moreover, only a few thousand Africans took domestic science classes in the 1930s, many of which were programs of only a few weeks. The Colonial Office and Education Departments' champagne education system plans failed to translate on the empire's beer budget. In Britain after the Great Depression, better incomes and increased access to nutritious food did lead to better nutrition. While the struggles of the poorest of Britain's poor worsened in the 1930s, every other economic class generally saw gains. The imperial food system drained colonial African resources and poured those resources into British grocery stores, providing Brits with cheap, nutritious food. Britain's failure to improve African nutrition was the cost of improving nutrition in the metropole.¹

Immediate Aftermath

While nutrition science underwent massive developments in the interwar period, its development in both Britain and Africa had only just begun. The end of the 1930s and the beginning of World War II stood as both the zenith and the nadir of British interest in developing Africa. On the one hand, the Nyasaland Nutrition Survey, which ran from 1938 to 1943, represented the culmination of the Colonial Office's efforts of the 1920s and 30s to carry out an in-depth nutrition study of a single colony. Two years after the

¹ Burnett, *Plenty and Want*, 285-88.

launch of the Survey, the 1940 Colonial Development and Welfare Act emerged from the same trajectory of renewed commitment to colonial welfare and represented a high point in the British commitment to African welfare. The Act reiterated Britain's dedication to colonial development, vowing to put even more time, money, staff, and resources toward the project of colonial development, including improving nutrition. The Survey and the Act both emerged as the products of the previous twenty years' worth of scientific, political, and economic interest in the state of colonial nutrition.

On the other hand, the beginning of the War also marked the beginning of a low point, as Britain shifted all its wartime attention and resources to the metropole. These priorities ultimately resulted in the worst famine in India since the 1890s. According to Harper and Bayly, many Indians considered the 1943 Bengal Famine "the ultimate demonstration of the hollowness of the British claim to be running a competent government amidst the inefficiency of the Orient."² What began in late 1942 as storm damage from a cyclone had ballooned into a full-blown famine a year later, as the corrupt local government and distracted Colonial Office failed to provide food or distribute seeds for a new harvest. With no famine code in place at the time, the famine ultimately killed approximately 3 million people.³

The Bengal Famine served as further proof that if providing good nutrition to its subjects justified the existence of the British Empire, then failure to provide adequate nutrition was a justification for independence from Britain. As the Nutrition Survey wrapped up in British Africa, three million British Indians died from starvation, stoking

² Christopher Bayly and Tim Harper, *Forgotten Armies: Britain's Asian Empire and the War with Japan* (London: Penguin Books, 2005), 281.

³ Bayly and Harper, *Forgotten Armies*, 285.

Indian anticolonial nationalism and driving one of the final nails into British imperialism on the subcontinent. After independence, the Indian government's famine codes successfully prevented the outbreak of famine, despite the regular resurgence of weather conditions such as draught that had created famines under British rule.⁴

World War II marked a turning point for both British and Nigerian domestic science programs. In Britain, domestic science schools did their bit to aid in the wartime efforts. Berridge House, for example, served as “a shelter, a rest center, and a First Aid Post” during the war.⁵ In Nigeria, World War II expanded women's employment opportunities as wartime efforts ramped up the colonial government's needs for more clerks and teachers. Because of these developments, in 1944 Nigerian women established the Women's Party, which lobbied for more jobs and education for women. The Women's Party expanded after the war, when there was more time and money to devote to the cause.⁶

After the war, British domestic science quickly became “home economics” or disappeared from curricula altogether, with nutrition science shifting from domestic science to hard science departments. Unlike British domestic science programs, which largely disappeared under the umbrella of other programs such as Nutrition Science by the 1950s, domestic science programs grew and flourished in 1950s Africa, although they also underwent a name change to the more modern “home economics.” While domestic science began to feel outdated in Britain after World War II, in Africa, colonial officials

⁴ Jean Drèze, “Famine Prevention in India,” in Jean Drèze and Amartya Sen, *The Political Economy of Hunger: Famine Prevention* (Oxford: Oxford University Press, 1991), 32–33.

⁵ Handley, *College of All Saints*, 35.

⁶ Denzer, *Women in Government Service*, 16, 18.

had more time and money than ever to invest in their colonial development projects, including women's education.

Despite British educators' best efforts to prevent the rise of an educated elite with the vocabulary for political independence, Nigerian domestic science teachers became prominent anticolonial nationalists after World War II. Elite, educated Nigerian women rose to prominence during decolonization because of their advanced training. For women, this advanced training frequently came in the form of domestic science degrees. For example, the "indomitable nationalist" Funmilayo Anikulapo-Kuti earned her diploma in domestic science in Britain in 1922. She went on to establish one of the first Nigerian women's clubs, which included an emphasis on cooking.⁷ Wuraola Esan, the first female senator in the Nigerian National Assembly, worked as a domestic science teacher at the CMS training center in Akure in the 1930s. Addressing her fellow senators in 1960, she asserted, "You are each of you here because there is some one to see that you do have your meals on time and that you are made comfortable after coming here to talk too much."⁸ She linked being fed with having the ability to govern, demonstrating that conducting politics depended on the work and support of women at home who, in turn, deserved the support of their government. Providing domestic science education, including cookery, to Nigerian girls and women occupied a central place in their agenda for Nigeria's future.⁹

⁷ Denzer, "Domestic Science," 132.

⁸ Nigeria, Senate Debates, April 2, 1960, 197, cited in Denzer, "Domestic Science Training," 133.

⁹ Denzer, "Domestic Science Training," 132-3.

Long-term Aftermath

More broadly, British scientific and political interest in colonial nutrition continued long after the 1930s. Throughout the mid- and late-twentieth century, famine relief and female education went on to make up common forms of British foreign aid to former colonies in the Global South. The paternalistic British desire to increase the welfare of countries wracked by poverty influenced by colonialism remains a foreign policy dynamic between Britain and its former colonies.¹⁰ Agricultural development schemes, anthropological research on nutrition, and domestic science classes continued to expand in the 1950s and 60s. The Rockefeller Fund, which had funded 1930s colonial experiments, also funded the 1980s and 90s research on golden rice, a genetically-modified strain of rice with increased Vitamin A. While the creators of golden rice hoped to decrease global malnutrition, nutrition experts remain skeptical, and scientific evidence for its effects on nutrition remain scarce.¹¹

These mid-to-late twentieth century developments in turn gave way to a host of current projects following along similar lines. For example, Monsanto distributed genetically-modified cotton seeds containing pesticide to Indian farmers beginning in 2002. The modified seeds only thrive on farms with irrigation systems, which the majority of Indian farmers do not have. Without them, the GMO seeds fare worse than regular seeds, leading to failed harvests. As a result, the seeds have been linked with skyrocketing rates of farmer suicide as recently as 2015.¹² The interwar willingness to

¹⁰ D. J. Morgan, *Colonial Development: a factual survey of the origins and history of British aid to developing countries* (London: The Overseas Development Institute, 1964).

¹¹ M. Enserink, "Tough Lessons From Golden Rice," *Science*, 320 (5875) 2008: 468–471.

¹² Andrew Paul Gutierrez, Luigi Ponti, Hans Herren, Johann Baumgartner, and Peter Kenmore, "Deconstructing Indian Cotton: Weather, Yields, and Suicides," *Environmental Sciences Europe* (2015) 27:12.

experiment on populations in the empire set a precedent for more recent GMO experiments exploiting people in the Global South.

The Svalbard Global Seed Vault carries on the view of nutrition and the agriculture necessary to sustain good nutrition as a global problem, even a global crisis, just as the League of Nations established in the 1920s. Its successor, the United Nations, issued findings that continue to echo the findings of interwar British researchers. While Britain is less of a team player with the continent nowadays, European agricultural and climate scientists continue to conduct research in Africa and take it back to the West. In 2013, a “United Nations report on food security and climate change identified conventional, high-input, mono-crop agriculture as a ‘key driver of and major victim of global warming.’ The call for a more ‘climate-friendly’ form of farming echoes [older calls for] small-scale, old-world, diversified vision.”¹³ Prioritizing profit in a global food market shifted resources away from the colonies and toward the West in the 1920s. The empire served Britain as a source of raw materials as well as a market for the finished products those materials became in British factories, such as canned food and powdered milk. In both directions of that exchange, British colonies paid, either in raw materials or in money for British products. Continuing to extract agricultural products and cash from the Global South for the next hundred years, in the midst of worsening climate change, the West has only exacerbated a century-old problem.

Alongside these overarching trends, pushes to educate African and other Global South girls and women proliferate in the form of Western charities. Without challenging

¹³ Dana Goodyear, “What Milk Should I Drink?” *The New Yorker*, October 23, 2015, accessed June 17, 2017, <http://www.newyorker.com/news/daily-comment/what-milk-should-i-drink>.

existing power structures, individual Westerners can feel good about making a difference in an individual African girl's life. Broadly, the unequal and paternalistic relationships between Britain, Europe, and the Global South have largely become more covert, such as the International Monetary Fund and World Bank's more subtle forms of financial imperialism. For example, the World Bank advocates charging user fees for healthcare, adding cost-prohibitive burdens to the world's poorest people in their attempt seek medical care. The World Bank makes user fees a requirement for receiving financial aid, putting disadvantaged countries in a bind as they must impose a financial burden on their poorest citizens in order to receive financial aid.¹⁴ While countries in need of aid may be self-governing, independent states, they remain at the whim of richer, more powerful countries who make their aid dependent on the terms they set. The sun may have set on the British Empire, but the United Kingdom continues to be the second-largest donor to the World Bank after the United States.¹⁵

Some fringe British politicians, however, continue more overtly to advance imperialist agendas under the banner of improved nutrition. In UKIP's 2017 general election manifesto, the party expressed its desire to ban the niqab and burqa because such garments "prevent intake of essential vitamin D from sunlight."¹⁶ It is perhaps worth noting, however, that UKIP received less than two percent of the vote and thus lost every

¹⁴ Emilie Robert and Valeri Ridde, "Global Health Actors No Longer in Favor of User Fees: A Documentary Study," *Global Health* 9 (2013): 29.

¹⁵ World Bank Group Finances, last modified 2017. <https://finances.worldbank.org/Trust-Funds-and-FIFs/world-bank-contributors/ckqa-728h/data>, accessed on July 15, 2017; Michael Goldman, *Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization*. New Haven: Yale University Press, 2005).

¹⁶ "Britain Together: the UKIP 2017 General Election Manifesto," accessed June 17, 2017, <http://www.ukip.org/manifesto2017>.

Parliamentary seat in that election, revealing Britons' current discomfort with overt imperialistic nationalism.

The Bigger Picture

The negotiation between African domestic science students and their British teachers serves as a microcosm of broader trends at work in British, African, gender, scientific and medical histories. In showing British central and colonial governments' resistance to altering unemployment benefits or colonial trade deals, the connections between how the state functioned in both the metropole and the colonies appear. In tracing how central and colonial governments decided to focus on female education to combat ignorance of nutrition, new dimensions to the historiographies of both gender and science emerge. The British school system serving as the vehicle for nutrition education puts the historiography of British education into dialogue with the body of work on science and medicine in Britain. The tensions over various pedagogies in African classrooms draw together histories of education, gender, and science on the African continent. By putting these analyses together, studies of science and gender in both Britain and Africa gain a transnational dimension. Ultimately, African women used pedagogical ambiguity to insert their own desires into the debate over their own education, which feeds into wider discussions of colonial survival strategies, colonial resistance, and the first stirrings of anticolonial nationalism. Working within the colonial system to obtain a domestic science degree served as one way to survive that system. Using that advanced degree to advance a political agenda of independence enabled domestic science graduates to subvert colonial rule. Their skills of English literacy and leadership as domestic science teachers provided them with the ability to articulate an

anticolonial nationalism that ultimately overturned colonial rule. British domestic science classes did not begin as African women's cup of tea, but by the end of empire, that training had become the icing on the cake.

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EDUCATION

- 2012- 17 Ph.D. in History, University of Kentucky (expected)
- Dissertation: “‘Something A Little Bit Tasty’: Women and the Rise of Nutrition Science in Interwar British Africa”
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- Qualifying Exam fields:
 Britain and Empire, 1815-1968
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- 2012 M.A. in History, Gender and Women’s Studies, Rutgers University
2010 B.A. in History and French, Murray State University (*Summa Cum Laude*)

PROFESSIONAL APPOINTMENT

- 2017 Assistant Professor, University of Southern Maine

PUBLICATIONS

- 2018 “Too Many Cooks Spoil the Soup: Conflicting British Nutrition Education Policy Approaches and African Responses.” *Journal of World History*. (Forthcoming, Winter 2018)

FELLOWSHIPS, AWARDS, AND HONORS

- 2016 University of Kentucky Dissertation Year Fellowship
2016 North American Conference in British Studies Stern Grant
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