The Making of the American Calorie and the Metabolic Metrics of Empire

ATHIA N. CHOUDHURY
Duke University

“The woman who boils potatoes year after year, with no thought of the how or why, is a drudge, but the cook who can compute the calories of heat which a potato of given weight will yield, is no drudge.”

— Ellen Swallows Richards

B. 1 slice whole wheat toast- low calorie bread
   ¼ tsp reduced-fat peanut butter

snk 1 small apple
     1 low fat string cheese

L. 3 oz steamed skinless chicken breast
    1 cup steamed broccoli

snk 3 oz low-fat, sugar-free yogurt

D. 3 oz white fish w/lemon
    ¼ cup brown rice
    1 cup steamed veggies

Total: 626 cals.
For as long as I can remember, I have been consumed by calories. The heat to energy conversion was a language I learned early and often. While my public-school education softened the traces of foreignness from my broken English, the string of dieticians and public health professionals provided for by the Florida KidCare network taught me the language of nutritional labels. My body—poor, fat, Brown, first gen—was always marked at risk and therefore fertile grounds for nutritional health reeducation by the state. I was the poster child for the economic and social cost of childhood ob*sity to the nation, and bodies like mine were the very reason certain agencies existed. Since the age of 12, I had cycled through fad diets, consumed appetite suppressants, slimming malts, and laxatives mostly under the supervision of adults and healthcare professionals. They all promised to fix my disordered eating and disordered body if I were finally ready to start my life.

I was 20, waiting tables, eating less than six hundred and fifty calories a day, injecting myself with human chronionic gonadatropin, and taking feminist philosophy courses at the university.

I’m not doing this to be skinny for, like, superficial reasons that would appease the white patriarchy. I’m doing this to be healthy.

The idea of health would spare me from more complex understandings of governance, of food politics and ambivalence, of the colonial aesthetics that shape our collective affective and bodily terrains. The idea of health and reaching towards it at whatever cost meant that a world I had only known as punitive, violent, and humiliating towards my body would finally let me live. Despite the physical ailments I experienced, the binge/purging cycles, emotional distress, excessive financial burden, and potential for organ failure, I actively participated in diet–debt making for almost two decades of my life, whole-heartedly endorsed by family, friends, strangers, and trained licensed medical professionals.

Why? What compelled this unflinching loyalty to self-surveillance, restriction, and punishment that escaped the critical lens of my feminist training? Moreover, how was this relationship between restriction and self-possession so clearly understood by all those around me as a necessary price for a future worth inhabiting? The ontology of the calorie filled my days and dreams long before I entered the field of postcolonial food studies; approaching the metaphorical table now, with my fleshy embodiments, attunes me to a dynamic story of the calorie and metabolic personhood during an era of scientification. I use the term “scientification” to refer to the processes by which the twentieth century rendered human experience as quantifiable data in spaces previously not considered part of the scientific process. Thinking alongside Denise Ferreira da Silva, who argues that “social scientific knowledge would refigure Self-Determination in the idea of development,” this article turns to how women’s labor in the home becomes reorganized as a science of wellness that measured the
developmental status of the US in comparison to the Third World and Brown bodies in need of refinement.³

As it goes, the story of the calorie is often narrated with white men at the center—white men who were the model bodies for the experiments that derived nutritional health parameters,⁴ white men who sought scientific evidence to measure the inferiorities of the Othered, white men who pushed forward public health initiatives in the image of those values they derived. Scholars have written about the racist, classist, and gendered dimensions of the BMI scale,⁵ while historians have written about the profound impact of Wilbur Atwater’s calorimeter experiments conducted at Wesleyan University—a ten-year project that was largely funded through state military contracts.⁶ Atwater’s data would be crucial to US military intervention at home and abroad in calculating efficient means for feeding troops, prisoners, and colonized subjects in occupied territories. While these historical analyses offer important insights into how we have come to think about food, health, and the state, this article turns to twentieth-century feminine/feminist discourses of American womanhood (and the imperial sentiments it surfaces) to uncover how the calorie became a shorthand for a politics of health and race through and as sensation.

The calorie, as the biopedagogical tool of self-management that we recognize today, was made legible by twentieth-century domestic scientists and food writers such as Ellen Swallows Richard, Adelle Davis, Margarette Murray Washington, and Atwater’s own daughter, Helen W. Atwater. Legitimizing the labor of the home as part of a national economy not only functioned as part of the soft civilizing project of American empire—as Amy Kaplan theorized in her work on manifest domesticity⁷—but uniquely developed a particular subgenre of public discourse around food and vitalism which stretched food literacy into a blurred public/private domain, enmeshing state welfare and public education with personal health, hygiene, childrearing, and individual consumerism. During this time, various health and hygiene campaigns were created by the US Department of Agriculture (such as the popular “Aunt Sammy” radio show) and commercial homemaking figures such as Betty Crocker rose to prominence.⁸ State and corporate campaigns touting the latest health technologies and home goods helped to supplant regional knowledges around homecare with universal practices that established expertise in the field of domesticity as the science of wellness.

In reading twentieth-century food literacy as an aesthetic, materialist, and phenomenological index of race science, this article argues that the vitalism of the eugenics movement sutures personhood to metabolics, where science and metaphor coproduce their own entanglements. Euthenics began as a movement in the late 1800s as the study of optimizing human wellness by controlling environmental conditions and lifestyle choices that produce undesirable populations, disease, and dysfunction. Ellen Swallows Richard, one of the earlier founders of the home economics movement who developed national infrastructure and curriculum for race/body betterment, defined euthenics as the future tense and tensing of the American eugenics project, writing: “Eugenics is hygiene for the future generations. Euthenics is hygiene for the
present generation.” Richard’s book, Euthenics: The Science of Controllable Environment, mapped her vision for a practical science of the body (the sensible world of becoming) and the home (the real world of being) as a way to achieve mastery over illness, disease, and degeneracy.

My turn to twentieth-century dietetic writings is not merely an exercise in uncovering the racist overtures of the early home economics movement. Rather, I seek to highlight how sentiments, methods, and habits of thought from the euthenics movement impact our contemporary approaches to public health, epidemiology, and feminist science studies research that seek to understand how environmental and material conditions produce undesirable populations (fat, disabled, chronically ill people) and uncritically seek to “fix” disorders without interrogating how we are trained to recognize what constitutes a disordered life and body. For example, while scholars have written a great deal about race, neoliberalism, and the rhetorical politics of Michelle Obama’s focus on childhood obesity (particularly about the symbolism and representations of food literacy in “post-racial” politics) during her Let’s Move campaign, the conversation takes on new valences within the context of longer imperial food projects where the US sought to measure, train, and educate bodies of color, Indigenous subjects, and foreign-criminal appetites. This context would suggest that Obama’s anti-childhood obesity campaign does not act as an upheaval or radical break from white supremacist eugenics projects of the twentieth century despite being portrayed as a Black-mothering project that takes places on the national stage, but continues curating the citizen-body through the very same domestic science and literacy tactics that utilize barometers of health and wellness to sanction and make legible demographic shifts in the American imperial politic.

The making of the American calorie embodied a racial and labor logic that branded much of US domestic and foreign policy and the current neocolonial food matrix as both an extension and distinct project from European colonial taxonomy, central to which was the image of the new American woman. The ontology of the calorie has been rehearsed in the private spaces of the home and kitchen that transformed into laboratories of life-management systems—more formally known as home economics programs—spearheaded by white women of America, practiced in academia and public schools, in advertisement and public agencies, and circulated from port to port in the guise of food literacy and anti-hunger campaigns that welcomed US military satellite colonies and repurposed agricultural waste. In looking at the literature of nutritional guides from prominent domestic scientists, we can trace how a new language of vitality begins to take shape in the home to describe the contours of the new American woman and the nation she keeps.

This article urgently asks reformers, activists, and researchers committed to global health equity, food, and environmental justice to reconsider how health is meant to act as a neutral metric for personal and public good. Twentieth-century domestic sciences allowed American women to participate in crafting cohesive narratives around US empire’s civilizing project at home and abroad while nutritional reformers
trained the public in new feelings and sensations towards food divorced from cultural and ethnic meaning. Both phenomena expanded and policed definitions of whiteness, able-bodiedness, and citizenship for the (migrant) working poor through colonial, racial, and gendered sensibilities adapted to relational networks of health. Both phenomena expanded and policed definitions of whiteness, able-bodiedness, and citizenship for the (migrant) working poor through colonial, racial, and gendered sensibilities adapted to transnational health networks. Most importantly, this article asks how metabolic personhood shapes who we are fighting to keep in the future. Euthenics delineates the kinds of bodies that must be regulated in the now and the ones who will eventually disappear in an optimized then.

**Metabolic Personhood**

The calorie is ubiquitous; the calorie saturates. Calorie literacy exemplifies the tensions of biopolitics and governance, wherein the modern subject can be educated into a life worth living. Five years after former First Lady Michelle Obama began her Let’s Move campaign to end childhood obesity within a generation, the July 2016 Food and Drug Administration’s final rule change to the Labeling and Education act of 1990 was implemented: calling for the displaying of calories per serving in food establishments and food distribution venues across the country. Upheld by the Supreme Court and Affordable Care Act, supporters argued that displaying the calories of prepared foods would lessen the burden on the American healthcare system while honoring consumer choice. This tenuous balance between public health and personal responsibility, communal care and private choices, scaffolded much of the discourse around corporate transparency and consumerism in the early 2000s and 2010s as the US continued to wage war on trans fats.

Spurring on the rule change was a landmark case in 2002 where Caesar Barber filed a class action lawsuit against four major fast-food chains for purposefully withholding nutritional information about the quality of their foods, arguing that doing so misled consumers about possible health effects. Barber and his legal team were characterized by the franchises’ defendants and major media outlets as trying to find someone to blame for his fatness, stupidity, and poor life decisions. His detractors argued that the case was brought forward because Barber was either an attention-seeker capitalizing on the traction of court victories against the tobacco industry or a delusional fool with no sense of personal responsibility. The case was presented as a public spectacle, appearing as punchlines for pundits, writers, and comedians who attacked Barber’s intelligence, sense of entitlement, and body size—markers that came to stand in for his race, class, and education level. Though Barber’s suit was ultimately unsuccessful (a fate also repeated by Ashley Pelman and Jessica Bradley), nutritional reformers and public health advocates continued to push for transparency and consumer education with a particular focus on low-income communities of color.
Two years later, there would be another “obesity litigation” case brought up against McDonald’s, specifically, by plaintiff Katherine Fettke.\(^{17}\) Fettke's lawsuit would not only be profiled nationally but was also one of the few landmark victories against a fast food franchise over nutritional requirements. *Forbes* magazine even wrote a feature piece about Fettke titled, “McDonald’s Plaintiff Not Your Average McFatso.” The article makes sure to show that Fettke is not a McDonald’s consumer herself, but a lifestyle and personal coach concerned with “helping others live their dream.”\(^{18}\) Furthermore, the article takes great pains to describe how the case is unlike other “obesity litigation cases” because it is invested in targeting trans fats that harm even nonobese bodies.\(^{19}\) Along with her affiliation with the American Heart Health association, Fettke, a thin, middle-aged white woman is described as credentialed as the “International Coaching Federation’s first Master Certified Coach”—an organization for which her husband served as vice president. Fettke is portrayed in the media as an accomplished, credentialed, and concerned citizen in opposition to Barber and Pelman and Bradley, whose lawsuits were framed as frivolous and stupid. Fettke’s thinness, whiteness, and her class status (i.e., that she is decidedly not a McDonald’s consumer) does the work of purifying her intentions with the lawsuit to understand her logic and actions as that of a concerned citizen fighting for common-sense nutritional regulation for the undereducated public that could fall prey to poor choices. The ideological quandary of nutritional literacy and the healthy citizen body is complicated by whose bodies are able to articulate grievance and redress and how the viscerality of fat (who has it/who consumes it) and race plays out differently in these court scenarios. I turn to Fettke as an example of how white American femininity acts as arbitrator of the national health project: as keeper, protector, and expert.

The 2015 FDA rule change represents the limits between the state and the body and the role of food literacy in shaping consumer choice. Even as Fettke’s iconic win was contingent on trans fat regulation in fry oil, why did the new FDA guidelines focus on calorie labeling as opposed to more robust regulations of food grades or transparency around additives and processing? Why was the calorie seen as the best shorthand for nutritional iconography that would allow people to determine whether or not to consume an item? What ideologies linger with the calorie as it fades into impressions of things left over: personal health and responsibility, hygienic form, and wellness aesthetics? To begin parsing these questions about biological matter through biopolitical mattering, I first turn to a genealogy of nutrition and coloniality to contextualize how diet and consuming certain kinds of foods come to signify the boundaries of the human. I then analyze twentieth century debates on nutrition, race, and food literacy campaigns through which metabolics became central to ideas of personhood in American empire.
Euthenics Nation

How we think and feel about diets are deeply entrenched in technologies of life management exemplified through colonial sentiments which find new meanings in American empire. The stomach has been a central site of contested domination and meaning making for scales of racial and gendered differentiation since early European colonization. Stories of hunger permeated the colonial world and colonial writing was replete with speculation: Why were the Indigenous peoples so different (lean, not prone to intestinal problems, and often without beards), and more importantly, how might (de)coding those differences help white settlers’ survivability on the land? Fundamental to these questions in the sixteenth and seventeenth centuries was an established logic which understood bodies as malleable, transformed by environments through the humors: the internal mechanisms that filled the body with its various liquids of bile and blood.

This complex enmeshment of internal fluids, climate, and food determined one’s temperament and function in society. More importantly, as historians of Early America have noted, the humors were institutionalized across the colonized world. Through colonial administration projects (such as plantation economies, caste systems, and miscegenation laws), health, capacity, and temperament were universalized as an everyday sensory framework for perceiving bodily and racial differences as discrete and fixed categories that could be identified across labor practices, eating habits, and social codes in the expanding colonial world.

The rise of germ theory in the nineteenth century shifted the priorities of colonial medicine from purifying “native lands” to purifying the bodies of the Natives themselves. The overarching narrative shift from humoral sciences to germ theory indicated emergent ontological questions at points of colonial contact: were the foods we consumed separate and discrete from the body we lived in? Could the foods of the other fundamentally alter the (white) interior self? The post-Enlightenment period attempted to answer these questions about contagion, consumption, and becoming the other—not as a radical break with humoral knowledges around the politics of eating, but by rerouting aesthetic form and symbolism through food as fuel for the body as a distinctly biological and closed system. As race science scholars concerned with the figure of the human have argued, the language of scientific reform proposed definitive markers of human difference that fit both within Enlightenment freedoms and colonial domination.

Gender and racialization, though disappeared through a language of empiricism in health, are central to the “biomutationally evolved body” in regard to the punitive histories of women’s eating and minoritized subjecthood. The lingering woman question in the Enlightenment and post-Enlightenment period served a particular function in American empire: modeling health, as ideology and social practice, to sediment the racial and gendered logics of colonization into the contours of biocitizenship. European racial taxonomies and their attendant scientific language were vital to US
empire as it sought to make sense of its status as a former colony freed from imperial rule alongside a growing desire for expansion and conquest. The next section argues that as the stomach mapped the contestations of European empire in the making of the human, the calorie, as a measure of vitality during American expansion, solidified the boundaries of the citizen-body.

**Race, Gender, and Biocitizenship**

Coloniality shifts and reframes understandings of health and eating as race becomes biologically fixed through Enlightenment logics and gender is sedimented across eating cultures. This joint process of disavowal and approval, inclusion and exclusion, is quintessential to how intimacies are mediated through European colonialism and American empire in the twentieth century. In *Tense and Tender Ties*, Ann Laura Stoler uses the term “imperial body politic” to describe the processes that aggregate colonial desire-making as part of the biopolitical fashioning of sexualized/racialized selves—arguing that carnality and flesh operate not only within private domains, but are reflective of “what has long marked the technologies of imperial rule—sliding and contested scales of differential rights.”

Rights, then, are contingent and manifold with degrees of separation as they are granted or denied to particular bodies (a power that is both central to the state and productively—in the Foucauldian sense—diffused across populations).

While the nineteenth century reveled in the project of fixing the human as a cohesive subject of rights, what is known as the American century fixated on the body as a site of transfiguration. What was race and how could it be stratified in the post-emancipation era, across expanding western territories that displaced and decimated Indigenous peoples on Turtle Island and México, through the US military outfits that territorialized and occupied islands in the Pacific and Caribbean, to the rush of Eastern European migrants into industrial urban cities? What were the boundaries of inclusion? Whose bodies were fit for transformation through educational and hygiene reform?

Six years after the Emancipation Proclamation and the complex and contested reorganization of the US plantation economy, sisters Catharine Beecher and Harriet Beecher Stowe published one of the best-selling books of the 1860s, *The American Woman’s Home: Principles of Domestic Science.* Often regarded as one of the earliest and most successful publications on the domestic economy (later known as home economics), *American Woman’s Home* provided a blueprint for the modest and modern New American Woman. The Beecher sisters, thought of as Antebellum reformers, sought to “elevate both the honor and remuneration of all the employments that sustain the many difficult and sacred duties of the family state,” by renegotiating labor-value of work done in the private sphere. They crafted a language for home managers through this widely circulated handbook, training American women in the domestic sciences through their specific qualifications and expertise.
Why did the Beecher sisters write a protofeminist treatise on domestic labor at this particular moment in America’s imperial formation? Though work was revered as a virtuous activity of self and subjection à la Locke and Hegel, the context of the industrial age and introduction to theories of thermodynamics shifted thinking around energy and output. Across species and machines, the language of thermodynamics standardized a relation of energy to the act of doing which introduced teleological questions about self-making in the era of mechanization. The Beecher sisters’ writings on the domestic scientist sought to reaffirm the virtues of labor and home-making as central to a healthy nation while simultaneously differentiating a hierarchy of work across racial embodiment entangled between the human, animal, and machine.

In a particularly telling section titled “The Case of Servants,” the Beechers describe the evolution of racially segregated work in the home in both slave states and free states. In comparing white women who were accustomed to enslaved Black women working in their homes, they write: “[T]he mistress, outdone in the sinews and muscles by her maid, kept her superiority by skill and contrivance. If she could not lift a pail of water, she could invent methods which made lifting the pail unnecessary,—if she could not take a hundred steps without weariness, she could make twenty answer the purpose of a hundred.” Ideas of efficiency for work are echoed here, where energy capacity is not nearly as important as optimizing output.

Later, they write of an Irish maid hired in the home, who, though “a creature of immense bone and muscle,” was let go because of her “heavy, unawakened brain.” Through much of their writings, it becomes evident that the American woman, though not physically equipped for labor, possessed superior mental faculties that solidified her status as domestic scientist and an embodiment of efficiency. In this treatise that elevates domestic work, the New American Woman, as a scientific home-maker, is not merely the force of energy, but a manager of energy output that designates her as a powerful catalyst for policing race in the intimate domain of the home.

By the early 1900s, the language of home management would make its way into the everyday vernacular of the American middle class through the popular presses. Helen Louise Johnson’s series in Harper’s Bazaar, “The Gospel of the New Housekeeping,” offers insight into the ideological shift in homecare from regional practices and folk knowledges to a universal science of wellness that acts as entrée into modernity. Taking on the tone of advice columns that were in vogue at the time, in the third issue of the series Johnson writes about “Mrs. Home-Made,” a 60-year-old homemaker who is struggling to feed her family on a budget. Johnson describes how Mrs. Home-Made was educated in homemaking “forty years ago, which meant, in general, no physics, chemistry, or biology, certainly no economics even of the most elementary character. She had been taught to cook and to sew and to ‘keep house’ by her mother, who in her time had cured meats, salted fish, spun linen, dipped candles, made the soap and many other household necessities.” Johnson details the ways in which these domestic chores were insufficient for the “intelligent feeding” of her family, arguing that the homemaker’s skills needed to change in the industrial age.
She writes that Mrs. Home-Made must be reeducated in how to “choose anew” and that “slight knowledge of scientific facts” would transform her approach to food, eating, and child-rearing. Knotted in this advice column is the story of personhood and metabolics, wherein Mrs. Home-Made has the capacity to choose modernity through the science of homemaking once she recognizes that food is “no longer viewed merely as something which would satisfy hunger while it pleased the palate, but from the point of view of the nourishment rendered.... [through] proteins, fats, carbohydrates, balanced rations and hundred-calorie portions.” What emerges is a different language of sensing food—more important than texture, taste, or cultural history, is relating food to a quantifiable measurement system that elicits standard responses from the body after consumption.

The science of wellness, as self-making apparatus, is entangled in a liminal space as both punitive and liberatory, as possible entry into the national body and barrier from full humanity. Johnson expresses the anxieties of many home economists at the time about the transformation of the home maker into a buyer. Reimagining the space of homemaking through the lens of practical science allowed women to escape the “sense of ignorance, this subconscious loss of power over things, [which] only increased the effect of that fatalism which the control of machinery was leading man out from under.” This anxiety marked a concern over what role home and womanhood would play under the ever-shifting conditions of industrial and imperial expansion.

Domestic science and Manifest Destiny promoted an American model of modernity that brought order to a world in chaos and fantasies about improving quality of life through uniquely American economic ingenuity. In Anarchy of Empire, Amy Kaplan considers how the force of the domestic is not separate from public life but is actually central to US imperial expansion. Kaplan argues that “the female realm of the domestic and the male arena of manifest destiny were not separate spheres at all but were intimately linked,” as they “reimagined the nation as home during a period of massive and violent expansion into Mexico and Indian lands (sic), which raised volatile questions of the expansion of slavery.” The next section considers how the domestic sciences and the figure of the managerial white woman helped to recalibrate the racial epidermal schema in American empire towards a more palatable fantasy of optimal health at home and abroad. In other words, how did the aesthetics of health, cast from ideals of whiteness, able-bodiedness, heterosexuality, and Western modernity attend to the particularities of efficiency as they were enmeshed in Progressive Era nutritional reform and colonial laboratories of sanitation and hygiene, to give rise to biocitizenship in the twentieth century?
American Appetites

The turn of the twentieth century marked a crucial moment in the ongoing process of consolidating the boundaries of whiteness as heightened racial anxiety spread through American port cities with the arrival of new Europeans. Wilbur Atwater’s theories of the calorie—as a means of quantifying the nutritional value and corresponding energy output of any given item of food—were gaining traction through military and domestic science circuits. Helen Atwater translated her father’s research into guidelines for the American public, working closely with government agencies such as the US Department of Agriculture to provide food literature, infographics, lectures, and newsletters that broke down the composition of food materials into fuel values (see Figure 1). The knowledges produced about the calorie and its uses in homes, public institutions, government agencies, and international exchanges would demonstrate the “plural and contested” nature of a pastoral eugenics that operated as relational, in that “the affects and effects of the guider [and] guided” refashioned the self and citizen.40

Late nineteenth- and early twentieth-century nutritionists and health reformers of the Progressive Era envisioned the calorie as an essential tool to improve the well-being of the working poor.41 The idea that foodstuffs had value outside of taste, culture, and class symbolism meant that reformers could introduce nutrient dense and cheaply made foods to the diets of the working poor. Calories were supposed to measure the feeling of fullness in empirical terms that could cluster abject matter into

Figure 1. “Composition of Food Materials” chart (Hunt and Atwater 1916), US Department of Agriculture/Internet Archive.
a singular human experience, where the measure of hunger and vitality emphasized the body as an engine in need of fuel as opposed to thinking of the sociality of consumption. Ideas around consumption, contagion, and interiority coded the flood of new settlers arriving in the coastal cities. Americans became fixated on food, appetites, and stature/body size as a way to designate an ethno-national identity that still fit within the cultural language of post-Enlightenment Man and preserve the boundaries between the self and other. As the category of whiteness became bound and unbound through class lines and American nativist genealogies, the cult of slenderness emerged as a fleshy marker of bodily propriety.42

Fat historical materialist scholarship has traced how portly European settlers who sought factory work in industrialized cities signaled to the American public a crisis of class and migrant contagion; violent practices of exclusion at the time demonstrate how whiteness, as a racial category, is formed alongside the corporeal fat-other.43 For example, Peter Stearns traces American diets and eating cultures in the nineteenth to twentieth centuries, where a fear of fat was grounded in class discourses as early Americans adopted French and British sensibilities around slenderness as a form of racial and class distinction from the new flood of hefty working-class settlers.44 As reformers focused on how the poor could better manage their homes and incomes, thereby making them more efficient workers and acceptable citizens, they reiterated and naturalized the boundaries of whiteness through a visual and sensory lexicon that attached appetite and body size to mental and physical health and capacity. The fantasy that the poor and minoritized could live well if they simply learned to manage their homes and stomachs better—a familiar refrain in our contemporary epoch—meant that those able to prove themselves capable of maintaining their figures could be accepted into the nation.

This imperative to strive towards health and efficiency was on display throughout the twentieth century, where reformers sought to protect vulnerable populations from unfettered corporate cronyism and capitalist exploitation. As the elite gained monopolies over budding transportation, energy, and other commercial industries, US borders expanded into the West and the Pacific. Anti-imperialists, abolitionists, and progressive reformers worked to stabilize the unequal socioeconomic and racial system (often in tension with one another) left in the wake of failed Reconstruction. Simultaneously, US military outfits in the Pacific and Caribbean and home economists on the mainland were conducting experiments in hygiene and sanitation that supposedly purified Indigenous bodies—killing the Indian; saving the man.45 Technologies of health management emerged in this period, continuing the work of nineteenth-century race science, and popularizing the eugenics and eutheinics movement.46

A new doctrine was emerging for American empire that transposed nineteenth-century colonial sensibilities around race, gender, and the human into empirical data sets focused on health, eugenics, and evolutionary potential. Though there are many points of entry for the nebulous set of practices that eventually coalesced around
“public health” as infrastructure and ideology, I turn to the Pacific after the Spanish-American war and the subsequent Philippine-American War where military barracks were run as laboratories of hygiene and sanitation in the Philippines and where US Home Economics would first develop programming abroad. Though a more detailed history of eugenics in the Philippines lies outside the scope of this article, it is important to note the influence and inspiration many home economists took from the Igorot World’s Fair exhibitions and the military hygiene practices. Following the success of hygiene demonstrations at the World’s Fair, many home economists advocated for permanent exhibit installations at universities and museums: as Richards explains, “the force of example, the power of suggestion, should be used fully before coercion is applied. Exhibits and models come before law.”

Moreover, medical–juridical rhetoric concerning whether Indigenous populations possessed the mental and public health faculties and facilities necessary for self-governance was a well-oiled trope by the time State officials sought public support for continued US intervention in the Philippines. The 1904 St. Louis World’s Fair featured a two-million-dollar living exhibition of the primitive Indigenous people, the Igorots. The spectacle of the living exhibit was promoted across media outlets as a shocking look into prehistoric life: America’s “little Brown brothers” barely dressed in scraps of clothes, living in straw huts, using stone tools and—most shocking of all—butchering and “eating” dogs under the gleeful and disgusted eye/camera lens of fair-goers.

Historians have noted that the consumption of dog for certain tribes in the Northern Highlands was part ritual and part medicinal. Yet, the midway fairs spectacularized dog-eating as a sensorial training ground for racial uplift and enforced daily butchering for eager audiences that could feel disgust, outrage, and nausea over the act. Often, the terms used to describe audience experience involved disorientation, a glimpse into the maddening/madness of the savage appetite. These articulations of the visceral in response to the spectacle of appetite were sensationalized and sensorialized as moral imperative for the American public—where the public feeling of disgust named which populations needed to be managed by white appetites. The stakes of hygiene and sanitation projects across the Pacific were made urgent and legible through the living exhibits, which argued for continued US militarism against the backdrop of a universalized scientific paradigm of health. Similarly, fat congealed across ideas of labor and whiteness through a sensing of a consolidated and palatable fantasy of American appetites.

Before the Great Depression, the calorie was often used as a tool of surveillance in colonial institutions, military installations, and penitentiaries as a means of population control and economic management. In the state-sponsored Native American boarding schools from 1860–1978, young children were stolen from their homes, stripped of their languages, religions, and cultural foods. In the early 1900s, these institutions subjected Indigenous children to weigh-ins where officials took meticulous notes on how their new diets transformed their bodies.
A state-sponsored intervention, fifteen hundred underweight school children in Baltimore were fed powdered/skim milk in an experiment directed by E. V. McCollum, an influential American biochemist and nutritional scientist of the time. The experiment included monitoring children in their homes, “regulating hours of their sleep, and selecting their food.” These two projects modeled public health research in the early to mid-twentieth century that emphasized how the lives of poor communities and Indigenous people were meant to be surveilled and rematriculated into more appropriate appetites and behaviors.

The impact of the antidrudgery movement was felt broadly—it worked to distinguish the human from the parahuman figure through the everyday and mundane acts of domestic carework, where the citizen–subject understood the delineations of labor and management of labor through racial logics. It also allowed the New American Woman’s influence to reach beyond regional audiences into the national and global arenas. Though in the US domestic science was still a regionally curated project, the ideas of certification and degree-requirements produced experts in the field. The scales of racial difference in domestic work modeled by the Beecher sisters’ earlier handbook thrived through this new generation of white women as they established certifications and home economics programs not only in the US but in the Pacific as well. The calorie continued to make its appearance in training manuals, recipe booklets, food labeling, and nutritional health iconography and documents well into the twenty-first century.

The function of the calorie transformed after World War I, in the midst of the Great Depression, from a technology deployed by the state in laboratories of health and hygiene for at risk populations to a self-prescribed management tool of the biocitizen in the service of the nation. As unemployment and hunger grew, national guidelines and educational resources around calorie fundamentals were circulated in schools, to homemakers, and in government institutions. Herbert Hoover, as president during the onset of the Great Depression, called his “police force”—the American woman—to arbitrate the ration system and calories across homes in America. Perhaps the call to police calories in the home during the Great Depression created the conditions of “calorie fetishism” that home economists found particularly gauche. Often presenting scientific studies and nutritional advice that “should go down all right with your daughters of these ages, because, by and large, the protective foods are not the food that interfere with the current vogue of the willowy figure,” the Bureau of Home Economics created content that designated what a truly modern American woman looked like through her moderate relationship to the calorie.

From the hundreds of segments of the Housekeepers’ Chat where “Aunt Sammy” had informal conversations with the American farmer’s wife, it becomes apparent that home economists of the time put a great deal of effort into rerouting misinformation about calorie tracking, restrictive eating, and other diet tactics more invested in maintaining a slim figure than cultivating health. As the show targeted
predominantly rural American women, the material presented offered two dichotomous images of the modern American woman: The first was an unserious woman who used calorie tracking as a vanity project to keep up with what was fashionable at the time. Aunt Sammy can be found making fun of such a woman, saying things like, “Maybe you have friends who make a fetish of calories, and spoil every luncheon by insisting on counting them—right there in public,” or “If you're like me, you want to make a dash for the door every time you hear anybody say “count the calories.”

This complaint about counting calories right there in public indicates a kind of incredulity about the openness in which the calorie fetishist does her bodywork and the discomfort she imparts others by mediating her appetites in such a way. This woman—conjured as willowy and interested in what was fashionable—was presented in contradiction from her more informed and serious counterpart. This other serious American woman was a dedicated home manager who used science to improve the life of her family. She not only understood food in economic values, but could identify proteins, fats, vitamins, and carbohydrates in the meals she made. Calories were not a tool to achieve beauty, but a system in which to better measure food value, human output, and overall health performance. The two images of the American woman were further complicated by the hunger that proliferated after World War II, which provided “a cornucopia of starvation research—a wealth of hunger.”

The distance between calorie tracking as a patriotic duty for public good and as an aesthetic project for personal vanity demonstrates how larger cultural anxieties over competing images of modern femininity and women’s role in the nation—as either shallow figure or substantive citizen body—was crafted in relation to one’s knowledge and use of the calorie.

As home economists continued to stress moderation, nutritional fundamentals, and simplicity for the average American, fad diets and weight-loss miracle cures circulated widely across the country. This sense of moderation and curation of wellness is, perhaps, what makes “health” such an insidious and difficult thing to untangle from the folds of the American citizen-project. The calorie appeared to take hold in the public imagination through two competing relationships—one that can be easily diagnosed as harmful and restrictive and the other as sensible. Home economists were not invested in thinness per se, but in understanding the very scaler and anatomic ways in which bodies would respond to food and how to optimize those sensations in the everyday—not for pleasure, but for fueling efficiency. It was the making of data sets and the rise of the language of optimization that instilled a sense of protoillness to natural phenomena of human difference.

Though a consensus around the domestic sciences as an experimental field of study and knowledge production was hotly contested throughout its formation, the visual iconography of the domestic scientist was embodied by Eleanor Roosevelt, as reformer, political strategist, and First Lady. As she expanded the roles and definition of First Lady, Roosevelt modeled the ideals of the modern scientific homemaker for the American people. Pushing against the Hoover administration’s slow and negligent
response to the economic crisis of the Great Depression, Roosevelt championed nutrition reform as one of her core projects as First Lady. As bread lines grew longer across the country, Roosevelt endeavored to model how food was merely fuel for the body and the efficient homemaker could manage hunger with the proper tools and knowledges. She began by redesigning the White House kitchen with its archaic food storage and cooking system and lack of proper refrigeration. Though she took great care to design a kitchen with the latest gadgetry, it appeared that Roosevelt had little desire or interest in food. The menu she approved was notoriously ghastly—meant to model Depression meals that average Americans could recreate in their own homes. It was well known that FDR—accustomed to luxurious and rich foods—and the White House cook, Henrietta Nesbitt (one of Roosevelt’s most trusted companions) were constantly at odds over the food served and that visitors were warned to eat before arrival.

By all accounts, Eleanor Roosevelt was a shrewd political strategist and visionary reformer who expanded the role of First Lady in a time of uncertainty about America’s role on the global stage. She was one of the most influential people of her time, conducting her own press conferences in the White House and distributing her widely read daily column My Day from 1935 to 1962. FDR was seen as the definitive head of state powers; Roosevelt performed a softer form of governance more suitable for women: one that maintained the integrity of the American home and family through modern ingenuity and forward thinking. This, in turn, reflected on ways in which the New American woman could find her place in the nation, by arbitrating, managing, and policing hunger in the body and boundaries of race in the domestic sphere at home and abroad.

When read in the context of the thousands of personal letters exchanged between Roosevelt and her network of queer kin and lovers, it becomes apparent that her performance as domestic scientist was a strategic mapping of gender and self-making. Where Roosevelt’s public-facing image was one of easy control, austerity, and a fervent belief that there was little use for food beyond sustenance, her personal letters revealed a person full of longing, hunger, and desires deemed excess by public sensibilities. Writing to one friend about the lush meals she enjoyed while in France, she describes the food with an almost reckless abandon. In a letter to her long-time friend and lover Lorena Hickok at the height of their romance, she writes: “I’m getting so hungry to see you.” Envisioning and producing her persona as public servant meant sanitizing and modeling a carceral relationship to hunger and a belief that food need only be measured in calories to be meaningful to the American people.

Conclusion: Listening to our Hunger

Months into my starvation diet—into splitting my days between calories—it was the Fourth of July barbecue when I decided to have one cheat day. I wanted to eat. I wanted to feel the pleasure of eating with other people who could still enjoy eating. I
remember a feeling of reverence rolling over me as I stared at the perfectly buttered bun that wrapped around the hamburger patty and the two juicy slices of watermelon sitting pretty on my plate (one hundred and eighty-five calories, respectively). The first bite was divinity: taste, texture, the give in chewing, consuming, becoming. The sweet, cool taste of the watermelon quenched a thirst months-long in the making. Yet, as my mouth chewed the food, as the food worked its way down my throat and through my body, I could feel the disgust working its way out, rising in bile and shame. I couldn’t hold it down; I forced myself to vomit.

When did my body learn to react to the feeling of fullness with disgust? The contradiction of being unable to hold onto the food and the force required to expel it from my body reveals the multiple directions in which disgust travels and the sensorium trained in tandem to relations of power. Sara Ahmed writes, “if disgust is about gut feelings, then our relation to our gut is not direct, but is mediated by ideas that are already implicated in the very impressions we make of others and the way those impressions surface as bodies.” In the latter half of the twentieth century, as health became an established metric for measuring national prosperity, health practices and ideas shifted from the Western paternalism of international health organizations to networks of global health that operate with universal scientific methods across continents. The idea of reform—drenched in its own Enlightenment and colonial origin stories—continues to haunt and shape international and global health; meanwhile Western imperialism, for the general polity, is systematically disappeared though it still very much functions with the same extractive, exploitative, and murderous practices. By looking to this genealogy of health that traces the permutations of the colonial subject to the biocitizen, we are better able to understand how health functions as a state imperial project that mutes these power dynamics through fantasies of universal public good.

The look of hunger is saturated with cultural meaning. While on a visit to the ONE Archives at the University of Southern California Libraries in the hot summer of 2018, I found myself looking over materials of the 1970s radical fat activist group, The Fat Underground, and various fat dyke zines from the 1980s and 90s for a glimpse into how activists and artists in the late twentieth century theorized and organized around hunger. In one of the manila folders was a crumpled-up slip of paper ripped out from the Midwestern anthology Shadows on A Tightrope: Writings by Women on Fat Oppression. Circled in the most delicate pencil marks were the words of Vivian F. Mayer: “Fundamental means of social control affects every person in a society. One might argue logically that the persecution of fat women takes away a woman’s right to be fat. More accurately, since there’s no way to look at a person, and know by her size whether she eats a little or a lot, the freedom women lose is the freedom to be comfortable with our appetites.” I think of this now in relation to the history of the calorie, and the private and institutionalized ways we learn to become uncomfortable with our bellies and desires.
Though the science around the calorie has changed significantly over the course of the century as dieticians and health practitioners develop new studies and approaches to food and eating, the vernacular used to sense health in our contemporary moment remains deeply embedded in its early formation and continues to exact a costly toll on how we punish and manage our bodies to fit within white supremacist normative ideals of health. The archives and histories I access here are partial yet particular as they sprawl across decades and place; my cultural reading practice looks for tendencies that wrap around the body. How can we track the feelings habituated—made into a collective common sensing—that remain from twentieth-century scientific reform? Health’s rhetorical function serve to scaffold the national body in technologies that live on in our bodies today. These sensorial sentiments—the stuff of touching and feeling—continue manifesting on our bodies long after the science has moved on.

Notes

1 I asterisk “obesity” throughout in alignment with fat liberation politics that seek to denaturalize the pathologization and stigma which renders fatness and fat people as medical problems and objects of study.

2 Human chronionic gonadotropin (hCG) is a pregnancy hormone that has cycled in and out of diet fad favor in the 1950s, 80s, and early 2000s. The diet requires patients to inject themselves five times a week every two weeks with HCG while maintaining a five-hundred-calorie starvation diet under the watch of licensed medical professionals. There is a ritual of biweekly weigh-ins, educational resources on how best to incorporate low-impact exercises, and nurses hawking nutritional supplements. Major health risks—such as organ failure—are often underemphasized as patients witness rapid weight-loss within the first two weeks, only to plateau within a month and later regain the lost pounds once returning to a normal diet.


8 US Department of Agriculture Bureau of Home Economics created a fictitious wife for “Uncle Sam” named Aunt Sammy. The *Housekeeper’s Chat* began in 1926 and many of the recipes and transcripts are archived in *Aunt Sammy’s Radio Recipes*. Though there was a general national broadcast script, the shows also took on regional/local dialects and cultural tones to best connect with various audiences through an advice column format. For more on the rise of “Betty Crocker” see Laura Shapiro, “and here she is ... your Betty Crocker!” *The American Scholar* 73, no. 2 (Spring 2004): 87–99, https://www.jstor.org/stable/i40055016


Katherine Fettke v. McDonald’s (2004).


“McDonald’s Plaintiff not Your Average McFatso.”


For example, as Spanish colonization expanded into new territories, extracting from land and bodies, the humors played a vital role in the classification process for bodily difference. Earle writes, Indigenous peoples were thought to consumer cold foods
such as fish, roots, and herbs where “cold food generated the abundance of cold humours that characterised the indigenous body, and which consequently shaped their character. Diet, in other words, was behind the distinctive indigenous body, as well as the docile indigenous character” (Earle, The Body of the Conquistador, 19). Through such logics, bodily difference becomes coded through European moralism where eating is the act of creating difference while also representing capacity—of having or lacking knowledges around what foods properly align the humors.


30 Though they were vocal abolitionists—Stowe most famous for her sensationalist and pornotropic depictions of Black life in Uncle Tom’s Cabin—their writings reveal white supremacist racial logics that promote the superior faculties of white American women in contradistinction to the racial and ethnic others over whom she manages.

31 Beecher and Beecher Stowe, American Woman, 430.

32 Beecher and Beecher Stowe, American Woman, 435.


Richards, Euthenics, Chapter 6.

Kaplan, Anarchy of Empire.

Kaplan, Anarchy of Empire, 26

Frantz Fanon, Black Skin, White Masks (New York: Grove Press, 2008), 84.


For more info, see John Harvey Kellogg’s extensive writing on dietetics and the need for low-calorie diets in several of his manuscripts: John Harvey Kellogg, The Battle Creek Sanatorium (Battle Creek, MI: Health Extension Bureau, 1922); Michael Vincent O’Shea and John Harvey Kellogg, Keeping the Body in Health (Macmillan, 1921); Autointoxication or Intestinal Toxemia (Battle Creek, MI: Modern Medicine Publishing, 1919), The Itinerary of a Breakfast (New York: Funk and Wagnall’s, 1918); and Ladies’ Guide in Health and Disease (Battle Creek, MI: Good Health Publishing, 1892).


Richards, Euthenics.

See Neel Ahuja, Bioinsecurities: Disease Interventions, Empire, and the Government of Species (Durham, NC: Duke University Press, 2016); Adria L. Imada, “A Decolonial Disability Studies?” Disability Studies Quarterly 37, no. 3 (August 31, 2017). http://dx.doi.org/10.18061/dsq.v37i3.5984; Adria L. Imada, Aloha America (Durham, NC:

49 Placeholder name for various tribes living in the Northern highlands of Luzon.


53 Cullather, “Foreign Policy of the Calorie,” 348.


56 “The Food We Eat,” Housekeeper’s Chat, Approved by the Bureau of Home Economics, United States Department of Agriculture, January 21, 1938.


59 It’s important to note that one of Roosevelt’s closest and most influential strategists was her lover and companion Lorena Hickok. Hickok urged Roosevelt to host her own White House press briefings (in contrast to FDR’s fireside chats) and recommended that she demand it be a women-only space so newspapers would be forced to hire women. Hickok also urged Roosevelt to write a daily column of her philanthropic and political works, often spending many hours personally editing drafts of My Day.


This shift from international health to global health is indicative of grassroots organizing and more holistic approaches to public good (i.e., an understanding that good health is also related to access to clean water, education, housing). Global health still presents many challenges and an uneven power/western paternalism is very much present as organization standard. The scope of this extends beyond the reach of this essay. For more detailed discussion on this, see Vincanne Adams, “Against Global Health? Arbitrating Science, Non-Science, and Nonsense through Health,” in Against Health: How Health Became the New Morality, ed. Jonathan Metzl and Anna Kirkland (New York: New York University Press, 2010), 40–58.


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